

Integrated Final Environmental Impact Report

Newby Island Sanitary Landfill and The Recyclery Rezoning Project

File No. PDC07-071, SCH# 2007122011

Prepared by



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INTRODUCTION TO THE INTEGRATED FINAL PROGRAM EIR

This Integrated Final Environmental Impact Report (EIR) document is a compilation of documents prepared individually and previously made available to the public. Consistent with normal practice in the City of San José, a First Amendment to the Draft EIR was prepared by the City prior to certification of the EIR. The First Amendment, together with the Draft EIR, constitutes the Final EIR for this project. This Final EIR document integrates these two documents, but does not change the contents of either. In conformance with Section 15132 of the CEQA Guidelines, this Final EIR contains the following, at the locations indicated:

- a) The Draft EIR in its entirety is found in the document which follows this page (including the appendices which are included in the CD at the end of this document).
- b) The information included in the First Amendment to the Draft EIR is incorporated into the text of the Draft EIR (pages i through 268) which follows and the appendices which are included in the CD at the end of this document. Following the protocol used in the First Amendment, deleted text is shown with strike-through and new text is underlined.
- c) Resolution of the City Council certifying the Final EIR for the project as complete and in conformance with CEQA (Appendix H).
- d) Resolutions of the City Council adopting findings for the Newby Island Sanitary Landfill and The Recyclery Rezoning Project (Appendix I).
- e) Notice of Determination for the Newby Island Sanitary Landfill and The Recyclery Rezoning Project EIR (Appendix J).

PREFACE

This document has been prepared by the City of San José as the Lead Agency in conformance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The purpose of this Environmental Impact Report (EIR) is to inform decision makers and the general public of the environmental effects of the proposed project.

This document provides a project level environmental review appropriate for the proposed Newby Island Sanitary Landfill and The Recyclery Rezoning Project, in accordance with CEQA Guidelines Sections 15121, 15146, and 15151.

In accordance with CEQA, an EIR provides objective information regarding the environmental consequences of the proposed project, both to the decision makers who will be considering and reviewing the proposed project, and to the general public.

The following guidelines are included in CEQA to clarify the role of an EIR:

Section 15121(a). Informational Document. An EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR, along with other information which may be presented to the agency.

Section 15145. Speculation. If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.

Section 15146. Degree of Specificity. The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.

- (a) An EIR on a construction project will necessarily be more detailed in the specific effects of a project than will an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.
- (b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.

Section 15151. Standards for Adequacy of an EIR. An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In accordance with Section 15082 of the CEQA Guidelines, a Notice of Preparation (NOP) was circulated to the public and responsible agencies for input regarding the analysis in this EIR. This EIR addresses those issues which were raised by the public and responsible agencies in response to the NOP. The NOP and the public responses to the NOP are presented in Appendix A of this EIR.

This EIR, and all documents referenced in it, are available for public review at the City of San José, Department of Planning, Building, and Code Enforcement at 200 East Santa Clara Street, 3rd Floor, San José, California, on weekdays during normal business hours.

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Appendices

(See attached CD at the end of this document)

Appendix A	Notice of Preparation (NOP) and Response Letters
Appendix B	Traffic Study
Appendix C	Air Quality Impact Analysis and Air Toxic Risk Assessment
Appendix D	<u>Revised</u> Biological Resources Report
Appendix E	Geotechnical Evaluation <u>and Sea-Level Rise Memo</u>
Appendix F	<u>City of Milpitas Odor Action Plan and Odor Impact Minimization Plan</u>
Appendix G	<u>First Amendment to the Draft EIR</u>
Appendix H	<u>Resolution No. 76391</u>
Appendix I	<u>Resolution No. 76392</u>
Appendix J	<u>Notice of Determination</u>

SUMMARY

The project proposes a Planned Development (PD) rezoning of the Newby Island Sanitary Landfill (NISL) and the adjacent Recyclery. The purpose of the proposed PD zoning is to allow the maximum height of the active portion of the landfill to be raised to 245 feet on the National Geodetic Vertical Datum of 1929 (NGVD29), adding approximately 15.12 million cubic yards to the capacity of the landfill. Presently, the landfill is designed and permitted to an elevation of 150 feet (NGVD29).¹

The proposed maximum height of the landfill would allow the landfill to continue receiving waste at existing levels until at least the estimated closure date of 2025. While the applicant anticipates that the landfill will reach capacity in 2025, it is possible that the landfill could close at a later date. While the City has control over the total volume of waste received at the landfill, the City does not have direct control over the closure date of the landfill. Therefore, the approval of the proposed PD zoning would allow indefinite landfill use as long as capacity remains at the landfill.

The proposed PD zoning will also conform and clarify the legal non-conforming uses on NISL and will specify the allowable current and future uses on the landfill property and at the Recyclery.

The following is a brief summary of significant project impacts and mitigation measures. The reader is referred to the main body text of the EIR for detailed discussions of the existing setting, impacts, and mitigation measures. **Section 11.0** provides definitions of terms and acronyms used in this EIR.

Summary of Impacts and Mitigation Measures

The following table summarizes the significant environmental impacts identified and discussed within the text of the EIR, and identifies the mitigation measures proposed to avoid or reduce those impacts. Alternatives to the proposed project are also summarized at the end of the table.

¹ Note that throughout this document, the amount of solid waste, recyclables, landfill capacity, disposal capacity, etc. are discussed in terms of tons and cubic yards. Tons and cubic yards are not interchangeable units of measurement. Tons measure weight and cubic yards measure mass. While it is possible to convert tons to cubic yards, materials (*e.g.*, residential solid waste versus commercial solid waste) weigh differently and it is difficult to accurately estimate the tons to cubic yard conversion of multiple waste streams. For this reason, tons and cubic yards are not meant to be interchangeable units or simply converted to the other.

Impact	Mitigation and Avoidance Measures
Air Quality	
<p>Impact AIR – 1: The project would exceed BAAQMD thresholds for nitrogen oxide (NO_x) and VOCs/POCs/ROGs.</p> <p>Less Than Significant Impact with Mitigation Incorporated</p>	<p>MM AIR – 1.1: As required by BAAQMD regulations, the project proponent shall be responsible for purchasing NO_x and VOCs/POCs/ROGs offsets for emissions in excess of BAAQMD's threshold of 15 tons per year of NO_x and 15 tons per year of VOCs/POCs/ROGs or obtaining the offsets through BAAQMD's Small Facility Banking Account. Prior to issuance of permits from the BAAQMD for the proposed landfill expansion or additional equipment (e.g., expansion of the GRS facility), the project proponent shall be required to purchase emission offsets based on projected project emissions. The offsets are a one time only purchase.</p>
Biology	
<p>Impact BIO – 7: The proposed project would result in significant impacts to burrowing owls and their burrows if present on-site.</p> <p>Less Than Significant Impact with Mitigation Incorporated</p>	<p>MM BIO – 7.1: <i>Pre-activity Surveys.</i> To avoid take of burrowing owls in violation of the MBTA, surveys for burrowing owls shall be completed in potential habitat in conformance with the CDFG protocol, no more than 30 <u>15</u> days prior to the start of any new ground-disturbing activity (<i>i.e.</i>, any activity that is not already ongoing <u>at the same location</u> as part of the current landfill operations) associated with the expansion of the landfill, such as filling or grading in previously undisturbed ruderal/grassy areas.</p> <p>If no burrowing owls are located during these surveys, no additional action is warranted. If these surveys detect burrowing owls on or within 250 feet of the site proposed for landfilling or other uses, then any ongoing landfill activity near an occupied owl burrow can continue as long as it does not increase in intensity, or encroach closer to an existing burrow, <u>based on a review of proposed/ongoing activities in the burrow's vicinity by a qualified biologist</u>, and as long as the existing burrow is not destroyed and owls are not in danger of being harmed. If activity would increase in intensity or proximity to an occupied burrow, <u>based on a review of proposed/ongoing activities in the burrow's vicinity by a qualified biologist</u>, the following measures shall be implemented:</p> <ul style="list-style-type: none"> • <i>Buffer Zones.</i> If burrowing owls are present during the breeding season (generally 1 February to 31 August), a 250-foot buffer, within which no new project-related activity shall be permissible, shall be maintained between project activities and occupied burrows. Owls present at burrows on the site after 1 February shall be assumed to be nesting on or adjacent to the site unless evidence indicates otherwise. This protected area shall remain in effect until 31 August or, based upon monitoring evidence, until the young owls are foraging independently. • <i>Relocation.</i> If ground-disturbing activities would directly impact an occupied burrow, the owl(s) shall be evicted outside the nesting season to avoid impacts to the bird(s). No burrowing owls shall be evicted from burrows during the nesting season (1 February through 31 August) unless evidence indicates that nesting is not

Impact	Mitigation and Avoidance Measures
<p>Impact BIO – 13: The approval of the project would increase the landfill’s capacity, which would extend the useful life of the landfill and its availability to gulls, corvids, and other nuisance species as a food resource. The proposed project would result in significant indirect impacts to sensitive wildlife from nuisance species at the landfill and Recyclery.</p> <p>Less Than Significant Impact with Mitigation Incorporated</p>	<p>actively occurring (<i>e.g.</i>, because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season).</p> <p>MM BIO – 13.1: The Nuisance Species Abatement Plan (NSAP), which is included in Appendix D of this EIR, shall be fully implemented at the landfill and the Recyclery as long as the landfill and/or Recyclery are in operation. Implementation and funding of the plan, including any consultants considered necessary and selected <u>approved</u> by the Director of Planning, Building, and Code Enforcement, and associated on-going City staff monitoring costs, shall be the responsibility of the landfill’s General Manager or Director of Infrastructure Development, while the City of San José’s Director of Planning, Building, and Code Enforcement shall oversee and enforce the NSAP’s implementation.</p> <p>The Plan includes standard nuisance species abatement measures (<u>maintaining the minimum size</u> minimizing the <u>working face of the landfill consistent with existing practice and permits</u>; compacting and covering refuse – including using safe and stable tarps, foams, or other materials in lieu of soil on the working face of the landfill if they are demonstrated to impede access to food waste by nuisance species; covering and rapid processing of tires; minimizing surface water; trapping <u>or shooting medium-sized mammals</u>; <u>using rodenticides within buildings</u>; and minimizing cover near nuisance species food sources and sensitive habitats) <u>that must be implemented, as well as</u> and adaptive nuisance species abatement measures (pyrotechnics, paintball guns, vehicles, trained dogs, trained falcons, human disturbance, distress call recordings, predator calls, decoys of distressed birds, visual distraction/deterrent devices, vegetation management, physical barriers and roots deterrents, rodenticides <u>rodent trapping</u>, a mobile component to gull abatement, use of radio-controlled drones, and mosquito larvicides) <u>that are to be used as necessary. The standard measures are required to be implemented, although it is not expected that all measures in the NSAP are to be used simultaneously, the landfill operator may choose the appropriate measures to meet the success criteria identified in the NSAP.</u></p> <p>Outdoor food waste processing on the Recyclery property attracts gulls and other nuisance species to an area of the site where the various abatement measures (pyrotechnics, cannons, falcons, etc.) are not generally used and may be inconvenient. Measures to control access to food waste by gulls and other nuisance species at this location must be implemented, including a building enclosure or netting. <u>The building or netting design must be reviewed by a qualified biologist that has been approved by the Director of Planning, Building, and Code Enforcement.</u></p> <p>As outlined in the NSAP, monitoring shall be conducted by qualified</p>

Impact	Mitigation and Avoidance Measures
	<p>ornithologists <u>biologists</u> under the direction of the Director of Planning, Building, and Code Enforcement (but commissioned <u>funded</u> by the landfill's General Manager or Director of Infrastructure Development) and approved by the Director of Planning, Building, and Code Enforcement to determine the effectiveness of initial abatement measures, and abatement techniques shall be adapted in consultation with <u>as determined by these</u> ornithologists <u>biologists</u> as necessary to ensure effectiveness. Regular monitoring reports (monthly memos and annual reports) shall be prepared and submitted to the Director of Planning, Building, and Code Enforcement by monitoring biologists to document the success of the abatement program. The monitoring and reporting criteria are outlined in detail in the NSAP in Appendix D of this EIR.</p> <p>For each group of nuisance species addressed by the NSAP, success of the NSAP is defined as maintaining or reducing abundance of nuisance species using the landfill relative to baseline levels <u>identified in the NSAP</u>. In other words, the abatement plan is not considered successful if measures of abundance of nuisance species exceed baseline levels.</p> <p><u>The Director of Planning, Building, and Code Enforcement will assemble and select members of an NSAP Oversight Committee. This committee will consist of qualified biologists, City of San José staff, and others chosen at the Director's discretion. The qualified biologists on the committee must include representatives from the Don Edwards San Francisco Bay National Wildlife Refuge and a Bay-area bird observatory. The Director may choose other biologists or others with relevant expertise, which may include City of San José Staff and the City's consultants. The NSAP Oversight Committee will review annual monitoring reports and provide recommendations to the Director regarding any changes in success criteria (including levels of abundance that should be considered the baseline against which monitoring results will be compared), abatement measures, monitoring measures, or other program components that should be made. This committee will be provided copies of monthly status reports and may also be consulted by the Director to discuss nuisance species abatement issues identified in monthly reviews. Meetings of the NSAP Oversight Committee shall include biologists that were retained to monitor wildlife at the landfill and Recyclery and who prepared the reports. For example, for gulls, the baseline conditions are the monitoring results from SFBBO's surveys from June 2008 into 2009. Because gull abundance in the South Bay may vary considerably from year to year, the "baseline" against which future monitoring results shall be compared to gauge the success of the abatement program is subject to change once the mean number of gulls on the ground per survey, compiled by month, from one or more additional years of monitoring is compared to or combined with SFBBO's data from 2008-2009. Qualified biologists selected by the Director of Planning, Building, and</u></p>

Impact	Mitigation and Avoidance Measures
	<p>Code Enforcement (but funded by the landfill operator), which may include City of San José staff, the City's consultants, and others (e.g., possibly SFBBO staff and/or Don Edwards San Francisco Bay National Wildlife Refuge biologists) shall review the first year of monitoring data and provide recommendations to the Director of Planning, Building, and Code Enforcement regarding any changes in success criteria (including levels of abundance that should be considered the baseline against which monitoring results will be compared) as well as any necessary changes in abatement measures (e.g., requiring the working face be permanently reduced to ensure gull numbers are equal or less than baseline levels), monitoring measures, or other program components. Additional details regarding the success criteria for nuisance species, including gulls, <u>corvids</u>, mammals, and mosquitoes, identified in the NSAP are provided in Appendix D of this EIR.</p> <p>It is expected that the abatement process will be adaptive, and there may be periods when the success criteria described in the NSAP are not achieved and <u>as the NSAP Oversight Committee and consulting biologists</u> determines the most effective means of limiting the landfill's subsidy of nuisance species populations. However, if the Director of Planning, Building, and Code Enforcement (in consultation with <u>the NSAP Oversight Committee</u> qualified biologists selected by the Director of Planning, Building, and Code Enforcement but funded by the landfill operator) determines that the NSAP is being implemented successfully for that year of operation, no additional mitigation of this impact (besides MM BIO – 13.2 below) is necessary. If the Director determines that the abatement program is not being implemented consistently and successfully, and adaptive management is inadequate to achieve the desired success criteria, then MM BIO – 13.3 shall be implemented.</p> <p>The implementation of this mitigation measure (MM BIO – 13.1) would not itself result in significant impacts. Since some level of abatement is currently ongoing, the noise, human activity, dogs, and falcons associated with gull abatement is part of the existing conditions, along with other ongoing landfill activities, which are discussed above as having less than significant impacts to species using surrounding marshes. Although abatement activities may increase in magnitude or frequency as a result of the implementation of the NSAP, the abatement activities are not expected to significantly impacts species using adjacent Refuge lands. Gull abatement could result in indirect effects on species using Refuge lands by resulting in temporary increases in predation rates on sensitive species if gulls that would otherwise have foraged at the landfill hunt for snowy plover chicks, avocet chicks, harvest mice, or the like when refuse is not available. This temporary indirect impact is considered less than significant because the long-term benefits of the gull abatement</p>

Impact	Mitigation and Avoidance Measures
	<p>(reduction in gull populations in the South Bay) outweigh the short-term adverse effects.</p> <p>MM BIO – 13.2: The landfill operator shall add a consistent mobile component to the abatement program. Specifically, one individual shall be dedicated to firing flares from a vehicle from different locations around the non-disposal area.</p> <p>MM BIO – 13.3: If the landfill operator is not meeting the success criteria specified in the NSAP, the operator shall be required to manage predators contribute funds to one or multiple ongoing predator control programs and/or provide habitat at an off-site, South Bay location(s) to benefit the sensitive species that are being adversely affected by nuisance species supported by the landfill. Such sensitive species may include species associated with managed ponds, such as the western snowy plover, terns, American avocets, and black-necked stilts, and/or species associated with tidal salt marshes, such as the California clapper rail, salt marsh harvest mouse, and salt marsh wandering shrew.</p> <p>If off-site mitigation is determined to be necessary, the Director of Planning, Building, and Code Enforcement, in consultation with qualified biologists as described in the NSAP and government agencies (<i>e.g.</i>, CDFG and USFWS) as appropriate, will determine the specific type and amount of off-site mitigation required. The type of mitigation required will depend on the type of nuisance species for which abatement measures are found to be inadequate, and the type of sensitive species potentially adversely affected by depredation or encroachment by the nuisance species. For example, if gull and corvid abatement is inadequate, off-site mitigation may take the form of a financial contribution to focused avian predator management programs being implemented by others in the South Bay (<i>e.g.</i>, elimination of problem corvids at snowy plover breeding locations); a financial contribution to habitat restoration and management projects being undertaken by others in the South Bay (<i>e.g.</i>, pond management and tidal marsh restoration by the CDFG at Eden Landing Ecological Preserve); acquisition and management/restoration of suitable pond and marsh habitat in the South Bay; or other measures to benefit sensitive species that are adversely affected by gulls and corvids.</p> <p>The amount of off-site mitigation, either in terms of the amount of a financial contribution to predator/habitat management or the acreage of habitat restoration/management required, will depend on the difference between nuisance species monitoring results and the success criteria specified by the NSAP. The Director, in consultation with qualified biologists, will determine the appropriate level of the financial contribution or habitat restoration/management required based on the level of performance of the abatement program and an analysis, using</p>

Impact	Mitigation and Avoidance Measures
<p>Impact BIO – 14: If the landfill were to operate beyond its estimated closure date of 2025, the project would <u>The project proposes to increase the capacity of the landfill, which would extend landfill activities and operations for an undetermined period of time. The extended duration of landfill activities and operations may result in significant impacts to the California clapper rail if the landfill operations continue to occur within 700 feet of its suitable habitat and significant impacts to the salt marsh harvest mouse, and salt marsh wandering shrew if the landfill operations continue to occur within 100 feet of their suitable habitat.</u></p> <p>Less Than Significant Impact with Mitigation Incorporated</p>	<p>the best information available at the time, of the likely effects of the nuisance species in question on sensitive species in the South Bay.</p> <p>MM BIO – 14.1: <u>Off-site Habitat Restoration/Enhancement.</u> If<u>Before</u> landfill activities continue beyond <u>the point of current permitted capacity (50.8 million cubic yards)</u>2025, the need for and extent of off-site mitigation for potential project impacts on the habitatshall be provided by the landfill operator for continuation of disturbance of California clapper rails <u>located within 700 feet of landfill activities during the extended project lifetime and on the habitat of salt marsh harvest mice and salt marsh wandering shrews located within 100 feet of landfill activities during the extended lifetime shall be determined by a qualified biologist based on the performance standards and criteria described below. If impacts are determined to exist based on such performance standards and criteria, the operator of the landfill shall implement off-site mitigation to the extent determined to be necessary by the Director of Planning, Building, and Code Enforcement in accordance with the standards and criteria described herein, salt marsh harvest mice, and salt marsh wandering shrews beyond 2025.</u> At this time, it is not possible to determine the precise type and extent of mitigation, if any, that is appropriate, because several determinants of to address the mitigation such as types and location environmental impacts that may be created by the continuation of landfill activities because the mitigation that is necessary will depend on several, unknown factors and distribution and abundance of suitable habitat for clapper rails in 2025 are unknown (see Appendix D for more detail).</p> <p>If<u>Before</u> landfill activities continue beyond 2025, <u>the point of currently permitted capacity (50.8 million cubic yards), the landfill operator must complete subsequent biological review. On January 1, 2018 or when the landfill has filled 48 million cubic yards (whichever is sooner), the landfill operator shall have a qualified biologist complete an</u> more refined <u>assessment of the impacts of continuing landfill activities on California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews prior to the point at which current permitted capacity is reached. That assessment shall consider (a) the types and locations of project activities at the landfill that will continue beyond the point of current permitted capacity</u>2025, <u>(b) the distribution and quality of habitat in the surrounding marsh, (c) the distribution of clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in the marsh (and more widely, in the South Bay, if appropriate), to the best and most complete extent that this can be determined or reasonably estimated, and (d) the use of the affected marsh by clapper rails, salt marsh harvest mice, and salt marsh wandering shrews (e.g., for breeding or nonbreeding use), and other relevant factors based upon the information known at the time. The biologist shall determine the effect of continuing landfill activities on clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in terms of the acreage of clapper rail, salt marsh harvest mice, and salt marsh wandering</u></p>

Impact	Mitigation and Avoidance Measures
	<p>shrews habitats impacted.</p> <p><u>The biologist shall then determine the effect of continuing those landfill activities identified as noted in the previous paragraph on clapper rails, salt marsh harvest mice, and salt marsh wandering shrews. This assessment will be based on consideration of the types of landfill activities that will occur in proximity to habitat suitable for these species; currently, “in proximity to” means within 700 feet of habitat suitable for the clapper rail and within 100 feet of habitat suitable for the salt marsh harvest mouse and salt marsh wandering shrew, although these distances may be refined during the assessment by more up-to-date information on effects of human activities on these species if more information is available when the assessment is performed. The biologist will consider any landfill activities involving the movement of heavy equipment, loud noise, and substantial vibrations, and new lighting to represent an impact if (a) those activities would not be performed during regular landfill closure or post-closure activities, and (b) they occur in close proximity to suitable habitat as described above.</u></p> <p><u>The biologist will also take into account the anticipated duration (beyond the point of current permitted capacity – 50.8 million cubic yards) of activities that will adversely affect these species. Because these impacts are indirect and temporary (not permanent, but indefinite), the impacts of continuing landfill operations will cease after landfill capacity is reached and the landfill is closed. As a result, in determining the impacts to these species’ habitat and/or populations, the biologist will consider the duration of the impact based on the predicted closure date as of the time that current landfill capacity is reached.</u></p> <p><u>The type, location, and duration of landfill activities shall be identified by the landfill engineer responsible for NISL, based on landfill contract information and on the landfill engineer’s professional knowledge and experience. Such information shall be provided to the Director of Planning, Building, and Code Enforcement and consulting biologist.</u></p> <p><u>The biologist’s assessment will determine the extent of impacts of continuing activities on the California clapper rail, salt marsh harvest mice, and salt marsh wandering shrew in terms of either impacts to these species’ populations (i.e., an estimate of the number of individuals/pairs affected) or the extent of impacts to these species’ habitats, taking into account both habitat acreage and quality.</u></p> <p><u>As part of this assessment, the biologist shall also conduct a survey of comparable salt marsh and brackish salt marsh habitat in the South Bay which are similar to the varying types of habitat within the 700 foot</u></p>

Impact	Mitigation and Avoidance Measures
	<p>buffer (for clapper rails) and 100 foot buffer (for salt marsh harvest mice and wandering shrews) as measured from the then projected future landfill activities. This survey shall: (a) consider the quality of the varying types of comparable habitat in these comparable South Bay areas and contrast it with the quality of the habitat within these buffer areas adjacent to the landfill; (b) determine to the extent practicable and allowed by then current laws and regulations the populations of average number of each of these special status species in the comparable South Bay habitats; and (c) determine to the extent practicable and allowed by then current laws and regulations the number of these special status species within their respective buffer areas around the landfill. Taking differences in habitat quality into consideration, the biologist shall then reach a professional judgment as to whether the special status species in the habitat areas adjacent to the landfill are less numerous than in the comparable South Bay habitat areas. If the biologist makes this determination, the landfill operator shall be required to provide off-site mitigation for the species in question on a one to one acreage ratio for the area of affected habitat adjacent to the landfill. The same off-site mitigation can serve to mitigate impacts to California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in a single location as long as the habitat restored or enhanced is suitable for all three species. The precise location and means of providing such mitigation cannot be known at this time, as tidal marsh restoration and other activities that occur between now and 2025 will influence available mitigation opportunities.</p> <p><u>A report of this assessment and the biologist's findings shall be submitted to the Director of Planning, Building, and Code Enforcement. If the Director of Planning, Building, and Code Enforcement determines, based on findings of the biologists' report or any other reasonable information available, that significant impacts to those species have not occurred from landfill activities up to that point in time and will not occur from continued landfill operations past the point of current permitted capacity (50.8 million cubic yards), the landfill owner will not be required to provide the off-site mitigation. If the Director of Planning, Building, and Code Enforcement, based on the findings of the biologist's report and any other reasonable information available, determines that the continued operation of the landfill past the point of current permitted capacity will result in significant impacts, off-site mitigation shall be provided to compensate for impacts to these species.</u></p> <p><u>Such mitigation shall be required to be implemented by the landfill operator using a one to one acreage ratio (i.e., the area of the largest affected habitat adjacent to the landfill to the area of mitigation habitat to be provided by the landfill operator, as described above). This off-site mitigation may take one or several forms, including, but not</u></p>

Impact	Mitigation and Avoidance Measures
	<p><u>limited to:</u></p> <ul style="list-style-type: none"> • <u>Restoring tidal marsh habitat suitable for use by these species</u> • <u>Enhancing tidal marsh habitat suitable for use by these species (e.g., via the control of invasive plants or alteration of the hydrologic regime [such as restoration of a muted tidal marsh to a fully tidal condition])</u> • <u>Enhancing populations of these species by increasing reproduction and survivorship (e.g., by controlling predatory or competitive animal species, in addition to the abatement required at the landfill itself)</u> <p><u>This mitigation may take the form of direct implementation by the landfill owner or a monetary contribution to similar efforts being performed by others, preferably in the area, such as efforts by the CDFG or USFWS. The mitigation must be described and in place prior to the landfill reaching its current permitted capacity of 50.8 million cubic yards.</u></p> <p><u>The same off-site mitigation can serve to mitigate impacts to California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in a single location as long as the mitigation implemented is suitable for and will benefit all three species. However, performance criteria for each species must be satisfied. For habitat restoration, performance criteria would include the presence of the target species within five years of the development of vegetation suitable for each of those species within the restoration area and management of the site in accordance with the species' habitat and life-history requirements. For habitat enhancement or for measures, such as predator or competitor control, targeting increased reproduction and survivorship, performance criteria would include an increase in populations of the target species, within five years of implementation of the enhancement measures, commensurate with the estimated impact of the project. Prior to the point at which waste exceeding the current landfill capacity is accepted by the landfill, the applicant shall have a qualified biologist. The applicant shall have a qualified restoration ecologist prepare and implement a mitigation plan, which shall be submitted and reviewed by the Director of Planning, Building, and Code Enforcement and the NSAP Oversight Committee, detailing the following:</u></p> <ol style="list-style-type: none"> 1. <u>A summary of habitat and population impacts</u> 2. <u>Goals of the mitigation restoration</u> 3. <u>A description of the type of mitigation</u> 4. <u>The location of the mitigation site(s) and description of existing site conditions</u> 45. <u>Mitigation design (for habitat restoration and enhancement efforts) including:</u> <ul style="list-style-type: none"> • <u>Existing and proposed site hydrology, geomorphology, and</u>

Impact	Mitigation and Avoidance Measures
	<p>geotechnical stability, as applicable</p> <ul style="list-style-type: none"> • Grading/restoration plan • Soil amendments and other site preparation elements as appropriate • Maintenance activities • Remedial measures and adaptive management measures <p>56. Monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, and monitoring schedule)</p> <p>67. A contingency plan for mitigation elements that do not meet performance or final success criteria</p> <p>The mitigation plan shall be submitted to the Director of Planning, Building, and Code Enforcement, <u>in consultation with the NSAP Oversight Committee</u>, for review and approval. <u>Once approved, the landfill operator shall fully implement and comply with such mitigation plan prior to accepting any new waste beyond the current permitted capacity of 50.8 million cubic yards.</u> The City shall ensure that the mitigation is provided and that the mitigation site meets its success criteria.</p>
Geology and Soils	
<p>Impact GEO – 1: Since the makeup of the buried waste on the landfill and D-shaped area is unknown, the construction or development of structures on the landfill or D-shaped area could result in significant geological impacts.</p> <p>Less Than Significant Impact with Mitigation Incorporated</p>	<p>MM GEO – 1.1: In order to construct <u>or relocate</u> buildings or structures anywhere on the project site, a design-level geotechnical report by a qualified professional that documents testing of conditions on the site shall be prepared at the PD Permit stage to the satisfaction of both the Director of Planning, Building, and Code Enforcement and the City Geologist.</p> <p><u>Specifically for improvements on the D-shaped area, the design-level geotechnical study shall a) identify the extent of the potentially liquefiable soils by completing closely spaced CPT soundings to more accurately locate potentially liquefiable soils, and b) identify the necessary measures needed to avoid and/or mitigate liquefaction impacts, in accordance with local building codes. Possible measures include deep soil mixing, jet grouting, dynamic deep compaction, removal and replacement, vibrocompaction/ vibroreplacement, and/or in-situ cementitious shear panels.</u></p>
Cumulative Global Climate Change	
<p>Impact C-GCC – 1: The project would be adversely impacted by the projected sea level rise and 100-year flood event of 13.6 feet.</p> <p>Less Than Significant Impact with Mitigation Incorporated</p>	<p>MM C-GCC – 1.1: <u>As part of the landfill’s annual capacity survey report, the landfill operator shall also evaluate the status of sea level rise to ensure that the perimeter levee is at least 11 feet above sea level.</u> If the sea-level were to rise to 3.6 feet <u>above mean sea level</u>, the project proponent shall raise portions of the existing levee that are below 14 feet (NGVD29) by about one foot to ensure protection from the predicted sea-level rise of 4.6 feet and 100-year flood event <u>of nine feet.</u></p>

The project would not result in significant and unavoidable impacts.

Summary of Alternatives

CEQA requires that an EIR identify alternatives to the project as proposed. The CEQA Guidelines specify that an EIR identify alternatives which “would feasibly attain the most basic objectives of the project but avoid or substantially lessen many of the significant environmental effects of the project.”

No Project Alternative

The CEQA Guidelines advise that “No Project” conditions are not a baseline for determining the significance of the project’s impacts; the purpose for having this section is to “allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project” [§15126.6(e)(1)]. The No Project analysis should discuss the existing conditions at the time the Notice of Preparation (NOP) is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, “based on current plans and consistent with available infrastructure and community services” [§15126.6(e)(2)]. The Guidelines state that the discussion will usually proceed along one of two lines, depending on whether the project is a “plan, policy or ongoing operation,” or if it is something else such as a development project on identifiable property.

Newby Island Sanitary Landfill and the Recyclery are permitted under their Solid Waste Facility Permits (SWFPs) to operate as (1) a sanitary landfill taking in up to 4,000 tons per day (tpd) of solid waste for disposal; (2) a materials recovery facility and recycling transfer station taking in up to 1,600 tpd; and (3) a composting facility permitted for 980 tpd of source separated green waste and food waste.²

If the proposed project is not approved, the sanitary landfill will continue to accept municipal solid waste (MSW)³ in tonnages consistent with its current permits and recent operations. As its current capacity is approached, the landfill will accept less and less waste in order to service its existing contracts at this landfill. Alternatively, the landfill operator could choose to close the landfill early and haul contracted waste to a more distant landfill. At this time, the landfill operator has indicated that their plan is to reduce incoming tonnages in order to allow contracted waste to be placed at Newby Island for the length of the existing contracts (2023) if the project is not approved. Other recycling activities on the landfill site are tied to the landfill operation as part of its legal nonconforming status. Parts of the landfill are used for the office and storage which uses are not allowed by existing zoning or permits and would have to be removed.

The D-shaped area is designated for *Light Industrial* uses in the City’s General Plan and therefore the currently unpermitted uses would need to be discontinued, or a separate zoning and new permits could be applied for by the property owner and could be adopted, allowing industrial uses that are

² Food waste is food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food. This type includes material from industrial, commercial, or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. (California Integrated Waste Management Board. Recycling and Waste Management Infrastructure Project, Definition of Waste and Recyclable Material Categories. 30 January 2009.)

³ MSW, also referred to as mixed municipal waste and garbage, includes all kitchen and table food waste, and animal or vegetable waste that attends or results from the storage, preparation, cooking or handling of food stuffs. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)

compatible with the NISL, San José/Santa Clara Water Pollution Control Plant (WPCP), and the Recyclery consistent with the General Plan.

The current uses of the Recyclery which are not consistent with the existing PD Zoning including outdoor processing of food waste, would be discontinued under the No Project Alternative. The Recyclery can continue to operate after the landfill closes.

Overall, the No Project Alternative would result in lesser shade and shadow impacts, as well as visual and aesthetic impacts because the existing permitted height is less than the proposed height. This Alternative would also result in similar land use (regarding impacts to trails and land use compatibility), transportation, noise, geology and soils, hydrology and water quality, hazards and hazardous materials, cultural resources, utilities and service systems, and growth inducing impacts as the proposed project. The No Project Alternative would likely result in greater air quality and energy (fuel) impacts with the need to transport waste to more distant locations sooner once NISL reaches capacity. The No Project Alternative could result in greater impacts to biological resources because the more aggressive enforcement and monitoring of abatement measures are not required, as they would be under the proposed project with the NSAP discussed in **Section 3.6 Biological Resources**.

The No Project Alternative would not meet any of the project objectives, which are listed in **Section 1.3**.

Location Alternative

The Location Alternative consists of expanding the capacity of Kirby Canyon Landfill by 15.12 million cubic yard (*i.e.*, the same amount proposed for NISL). Kirby Canyon Landfill is an existing landfill located at 910 Coyote Creek Golf Drive in San José that is owned by Waste Management (not Allied Waste). Under the Location Alternative, if the proposed project is not approved and NISL continues to take in waste at current levels (and the landfill would likely reach capacity in 2016), waste (non-contractual) that would otherwise have been delivered to NISL could be delivered to Kirby Canyon Landfill. If this Alternative were to be approved instead of the project, additional environmental review would be required to analyze the impacts of expanding Kirby Canyon Landfill. Under the Location Alternative, if the proposed project was not approved and NISL reduced incoming waste to just contractual waste, the non-contractual waste that would typically be delivered to NISL would be encouraged to be delivered to Kirby Canyon Landfill.

Overall, the Location Alternative would avoid the project's impacts to biological resources and would have similar impacts to land use, visual and aesthetic, air quality, geology and soils, hydrology and water quality, hazards and hazardous materials, cultural resources, utilities and service systems, and energy. There would be different, but likely significant impacts to endangered species. Since Kirby Canyon is located in serpentine habitat, which is known to contain endangered species, expansion of the landfill is likely to result in significant impacts to those species (bay checkerspot butterfly, Metcalf canyon jewel flower, Mt. Hamilton thistle, and others). The Location Alternative would redirect traffic to Kirby Canyon, which would increase haul vehicle noise at Kirby Canyon Landfill; however it is not anticipated that the Location Alternative would result in significant traffic or noise impacts. Allied Waste does not own or have control of Kirby Canyon Landfill, therefore, the feasibility of implementing this Alternative is unlikely. This Alternative would not meet project objectives A (optimizing use of the permitted footprint of NISL for disposal capacity), B (increasing the height of NISL to increase its disposal capacity to allow the landfill to continue to accept historic waste volumes), or D (creating a comprehensive zoning district that recognizes and allows for the existing landfill, recycling, and waste diversion activities).

Reduced Gull Access to Food Alternative

The more exposed waste, the more food is available to support more gulls. If the working face of the landfill could be substantially reduced and the outside food process area at the Recyclery was enclosed, the numbers of gulls foraging would also reduce accordingly. The Reduced Gull Access to Food Alternative would therefore substantially reduce the size of the existing working face to maintain or reduce the abundance of nuisance species (including gulls) at the landfill to baseline conditions and enclose the currently outdoor food processing area west of the Recyclery building.

The Reduced Gull Access to Food Alternative would result in similar land use, visual and aesthetic, transportation, noise, hazards and hazardous materials, cultural resources, and utilities and service systems impacts as the project. This Alternative might reduce impacts from nuisance species, and might result in incrementally greater air quality, energy, water quality, and geology and soils impacts than the proposed project. This Alternative would also meet all of the project's objectives.

Allied Waste believes this Alternative (particularly the reduced working face component of the Alternative) is infeasible. Allied Waste believes reducing the working face of the landfill would result in safety hazards, reduce the landfill's ability to serve the public, reduce the landfill operator's ability to properly place and compact waste (which could result in voids or gaps and landfill instability), and result in regulatory noncompliance. It is not anticipated that enclosing the outside food processing area at the Recyclery would result in regulatory noncompliance. Moreover, Allied Waste believes this Alternative would not reduce gulls at the landfill.

Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the discussion above, the environmentally superior alternatives to the proposed project are the Reduced Gull Access to Food Alternative because it would reduce the project's gull impacts and the Location Alternative because it would avoid the project's gull impacts. In the case of the Reduced Gull Access to Food Alternative, even just enclosing the food waste processing area at the Recyclery would be a superior alternative.

Known Views of Local Groups and Areas of Controversy

Issues raised by local groups and residents about the proposed project have included concerns related to gulls, impacts to the Refuge, visual impacts, odor, and geology.

1.1 PROJECT OVERVIEW

The project proposes a Planned Development (PD) rezoning of the Newby Island Sanitary Landfill (NISL) and the adjacent Recyclery. The purpose of the proposed PD zoning is to allow the maximum height of the active portion of the landfill to be raised to 245 feet (NGVD29), adding approximately 15.12 million cubic yards to the capacity of the landfill. Presently, the landfill is designed and permitted to an elevation of 150 feet (NGVD29), as approved by the Local Enforcement Agency (LEA) and concurred with by the California Integrated Waste Management Board (CIWMB).

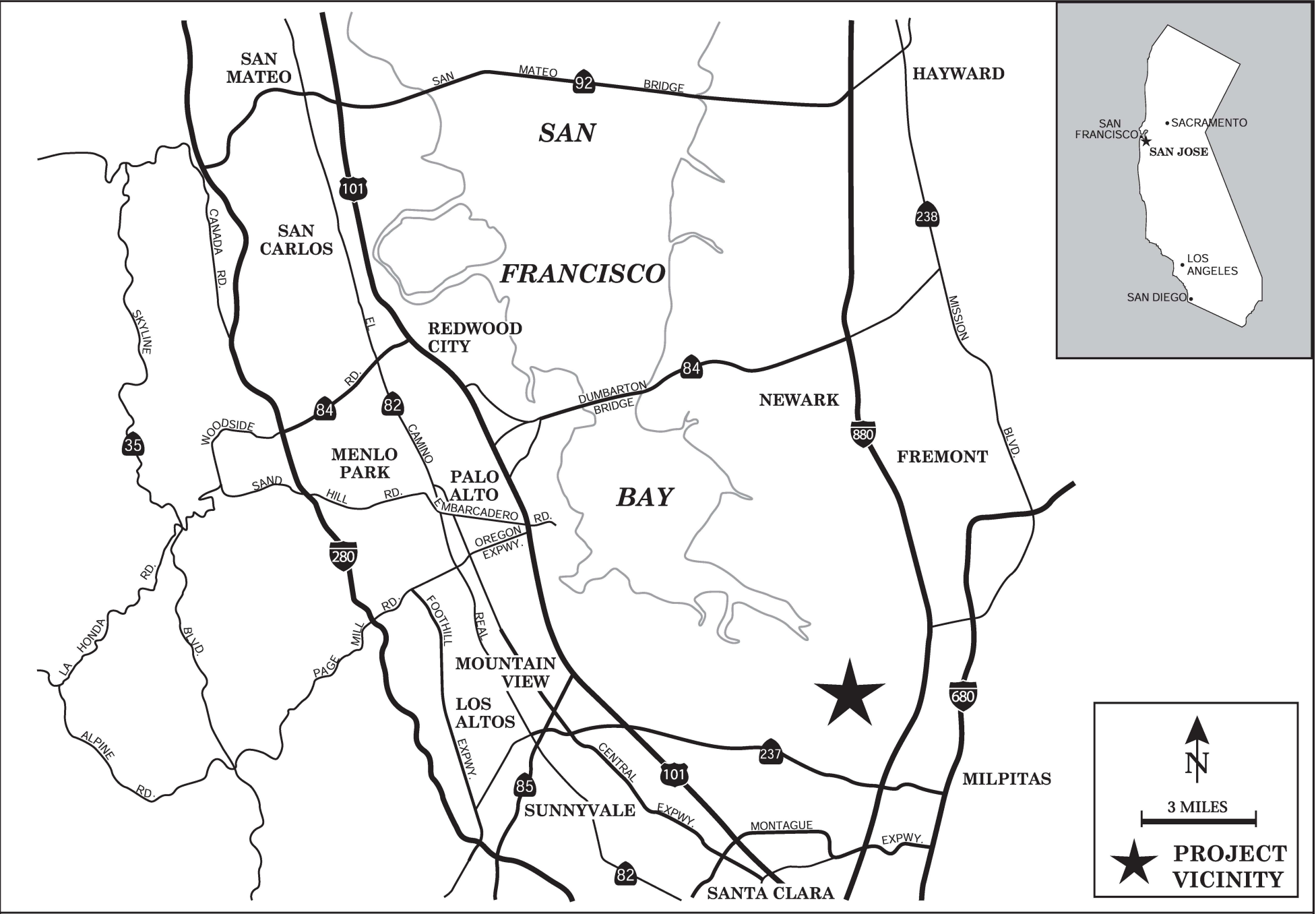
The proposed maximum height of the landfill would allow the landfill to continue receiving waste at existing levels at least until the estimated closure date of 2025. While the applicant anticipates that the landfill will reach capacity by 2025, it is possible that the landfill could close at a later date. While the City has control over the total volume of waste received at the landfill, the City does not have direct control over the closure date of the landfill. Therefore, the approval of the proposed PD zoning could allow indefinite landfill use as long as capacity remains at the landfill. The proposed PD zoning will also conform and clarify the legal non-conforming uses on NISL and will specify the allowable current and future uses on the landfill property and at the Recyclery. The proposed rezoning would not increase the lateral extent of the landfill footprint or increase the permitted quantity of waste that can be brought to the landfill on a daily basis.

1.2 PROJECT LOCATION AND CONTEXT

The approximately 352-acre project site consists of the Newby Island Sanitary Landfill (NISL) and the adjacent Recyclery [Assessor's Parcel Numbers (APNs): 015-40-003, 015-40-005, and 015-47-001, respectively]. The NISL property is approximately 342 acres in size. Immediately adjacent to the southeast, on a separate 10-acre parcel is the Recyclery, a Materials Recovery Facility (MRF).⁴ The project site is referred to as the “Newby Island Sanitary Landfill and The Recyclery.”

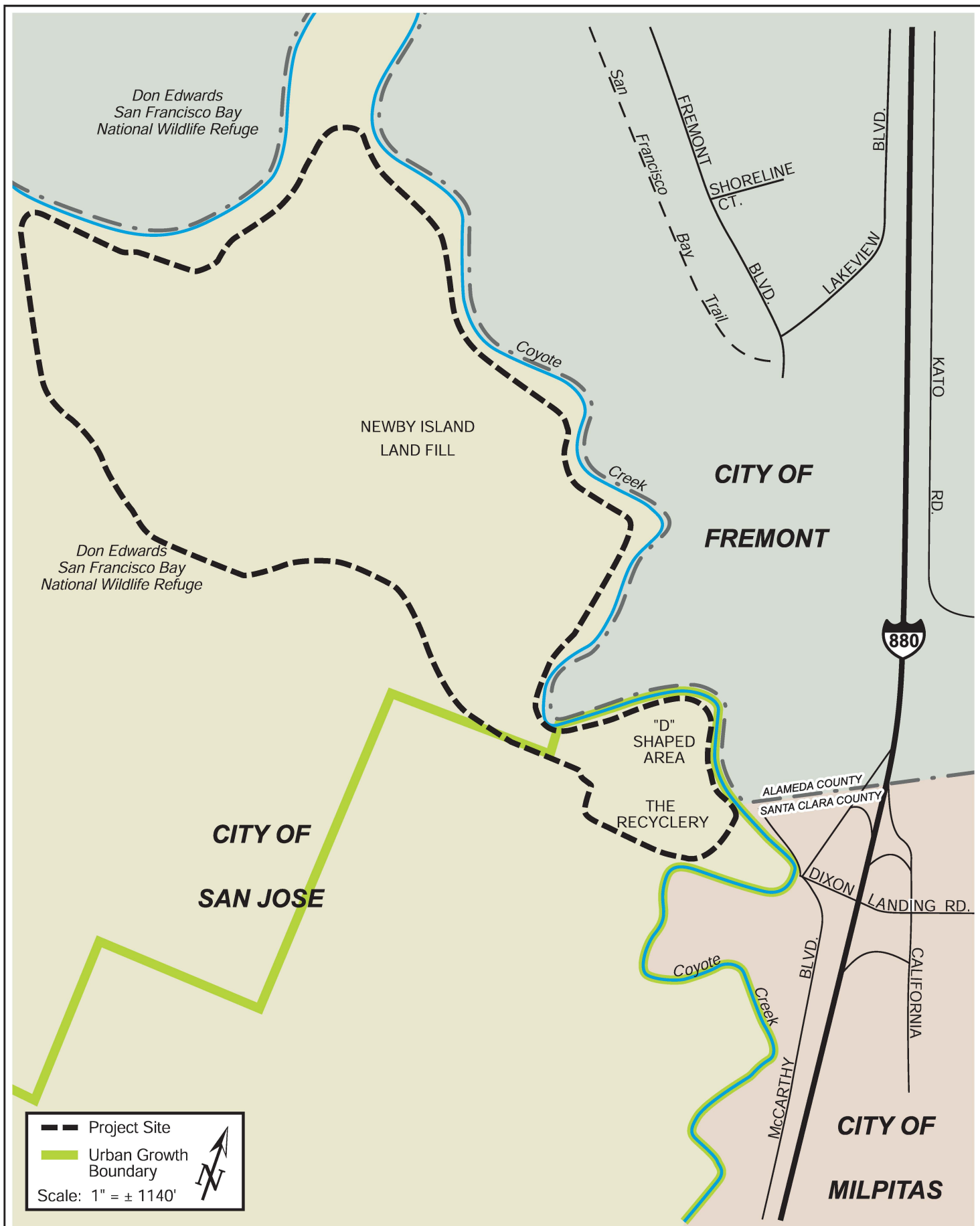
The project site address is 1601 Dixon Landing Road, Milpitas and it is located in the City of San José at the western terminus of Dixon Landing Road. Although the mailing address and public street access to the site are both in the City of Milpitas, the landfill and Recyclery properties are entirely within the incorporated boundaries of the City of San José. Regional and vicinity maps of the project site are shown on Figures 1.0-1 and 1.0-2, respectively.

⁴ A Materials Recovery Facility (MRF) or “recycling facility” is a facility involved with the collecting, processing, and/or transferring of reusable or recyclable materials. (City of San José. Zoning Ordinance. 20.200.990.) Contaminants found in loads of recyclables, including garbage and hazardous materials, are removed and disposed of appropriately.



REGIONAL MAP

FIGURE 1.0-1



VICINITY MAP

FIGURE 1.0-2

The project site consists of three visually distinct subareas: (1) the great majority of the landfill property comprises the largest subarea, containing approximately 325 acres that include 296 acres that currently are or have been, and are permitted to be used for active landfilling and 29 acres of sloughs and marshland that will not be used for landfill; (2) the “D-shaped area,” which is also part of the landfill property, is approximately 17 acres north of the main driveway just west of the entrance gate, and is currently used for offices (in temporary trailers), storage, vehicle parking and wood processing but is permitted to be landfilled; and (3) the Recyclery, the building for which occupies most of a 10-acre area just south of the main driveway, west of the entrance gate, opposite the D-shaped area (the entire 10 acres is generally referred to as the Recyclery). A summary of the subareas and acreages is provided in Table 1.2-1.

Table 1.2-1: Summary of Existing Project Subareas and Acreages				
Subarea	Landfill Site		Recyclery	Total
	Landfilling Allowed	Landfilling Not Allowed		
	acres			
1 – Active Landfill	296	29	---	325
2 – D-Shaped Area	17	---	---	17
3 – The Recyclery	---	---	10	10
Total	313	29	10	352

Land uses within 1,000 feet of the project site include the San Francisco Bay National Wildlife Refuge and wetlands southwest, west, and northwest of the site; and the San José/Santa Clara Water Pollution Control Plant (WPCP) and biosolids lagoons south and southeast of the project site. Lands north, northeast, and east of the project site are currently being developed for commercial/light industrial uses or are being managed as restored wetlands. An aerial photograph with surrounding uses is shown on Figure 1.0-3, and distances from Newby Island are shown on Figure 1.0-4.

1.3 PROJECT OBJECTIVES

The purpose of the project is to optimize the design of the project site by increasing the allowable top elevation of the landfill from 150 feet to 245 feet, resulting in a 15.12 million cubic yard capacity increase. The proposed height of 245 feet (NGVD29) would allow the landfill to continue receiving waste at the existing rate at least until the estimated closure date of 2025. At the same time, the current legal non-conforming zoning of the landfill site would be made consistent with the General Plan designations and the zoning for the Recyclery modified to conform to current and anticipated future uses. The primary objectives of the project proponent are to:

- A. Optimize use of the permitted footprint of the landfill for disposal capacity;
- B. Increase the height of the landfill to increase its disposal capacity to allow the landfill to continue to accept historic waste volumes from the region. No change is proposed to the landfill’s estimated closure date (identified as 2025 in the landfill’s *Preliminary Closure and Post-Closure Maintenance Plan*, July 2006) or the landfill’s Solid Waste Facility Permit (Permit No. 43-AN-0003, March 1997);

- C. Enable the project site to continue to provide nearby waste disposal and recycling solutions for the City of San José and surrounding municipalities, thereby avoiding the environmental impacts that would be associated with trucking solid waste to more distant facilities;
- D. Create a comprehensive zoning district that recognizes and allows for the existing landfill, recycling, and waste diversion activities with flexibility to allow for future technologies/innovations to be used on the site;⁵ and
- E. Produce additional landfill gas for use as a renewable energy source for power generation by the on-site power plant.

1.4 PROJECT DESCRIPTION

1.4.1 Background Information

The following sections describe existing entitlements for the project site and provide a summary of past and present operations in general terms.

1.4.1.1 *NISL*

NISL is a solid waste disposal facility that presently provides disposal capacity to a number of cities, including San José, Milpitas, Santa Clara, Cupertino, Los Altos, and Los Altos Hills. NISL is operated under permits issued to International Disposal Corp. of California (IDC). The property on which the landfill is located is owned by IDC, which is a wholly owned subsidiary of Browning-Ferris Industries of California, Inc (BFIC), which in turn is a subsidiary of Allied Waste Industries, Inc. Recently, Allied Waste Industries, Inc. merged with Republic Services, Inc. and Allied is now a subsidiary of Republic. Newby Island is a Class III landfill facility as defined by the State Water Resources Control Board.⁶

NISL is a legal non-conforming land use in the City of San José. The site has been used as a landfill since the 1930's. It was annexed into the City of San José in 1968 as an operating landfill. The landfill site is within the boundary of the *Alviso Planned Community* in the City's General Plan. The landfill area is currently designated as *Private Open Space* with a *Solid Waste Landfill Overlay* and zoned *Multiple Residence District* (R-M) (refer to Figure 1.0-5). Most of the property is outside the Urban Service Area (USA). The General Plan identifies the *Private Open Space* designation within the Alviso Planned Community as appropriate to privately-owned lands used for "low intensity, open space activity primarily within the Urban Service Area." The *Solid Waste Landfill* overlay is used to identify active landfill sites. Uses allowed include landfills and ancillary activities such as recycling, resource recovery, and composting.⁷ The *Solid Waste Landfill Overlay* is specifically identified as compatible with the *Private Open Space* designation.

⁵ Future technologies and innovations to be used on the site would be technologies and innovations in equipment and processes related to landfilling, recycling, composting, and energy recovery.

⁶ Class III landfills accept non-hazardous municipal solid waste and meet specified requirements for protecting the environment [§20260 California Code of Regulations, Title 27].

⁷ Composting is the controlled or uncontrolled biological decomposition of organic wastes. (PRC§40116.1) For this project, the composting operations includes the process of collecting, grinding, mixing, piling, and supplying sufficient moisture and air to organic materials to speed natural decay.



Source: HT Harvey & Assoc., 6/08.

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 1.0-3



— Project Boundary
Scale: 1" = ± 2,000'
Photo Date: Dec. 2005



DISTANCES FROM NEWBY ISLAND

REVISED FIGURE 1.0-4

Under current permits, approximately 313 acres (including the D-shaped area discussed below) is an existing landfill for which existing permits issued by the City of San José and the State of California allow use for solid waste disposal. This area is bounded by a perimeter levee. Another 29 acres consists of sloughs and marshland outside of the perimeter levee and will not be used as landfill. The project site takes access from Dixon Landing Road and contains various paved and temporary roads.⁸ Under existing permits, landfill construction and final grading will achieve a maximum height of approximately 150 feet (NGVD29).

D-Shaped Area

A 17-acre flat portion of the NISL site is referred to as the D-shaped area because it is visually distinctive and generally separated from most of the landfill. It is within the USA, has a General Plan designation of *Light Industrial*, and is also currently zoned R-M (refer to Figure 1.0-5). The D-shaped area is located just inside the gate of Newby Island and north of the Recyclery.

The D-shaped area was included in the USA and its General Plan designation changed at the request of the property owners in 2002 (File No. GP01-04-03). The then-stated purpose of the redesignation request was to allow use of the 17 acres for a corporation yard for the waste hauling business operated by the landfill owners. However, after approval of the General Plan designation, the subsequent rezoning was not approved and is currently inactive.

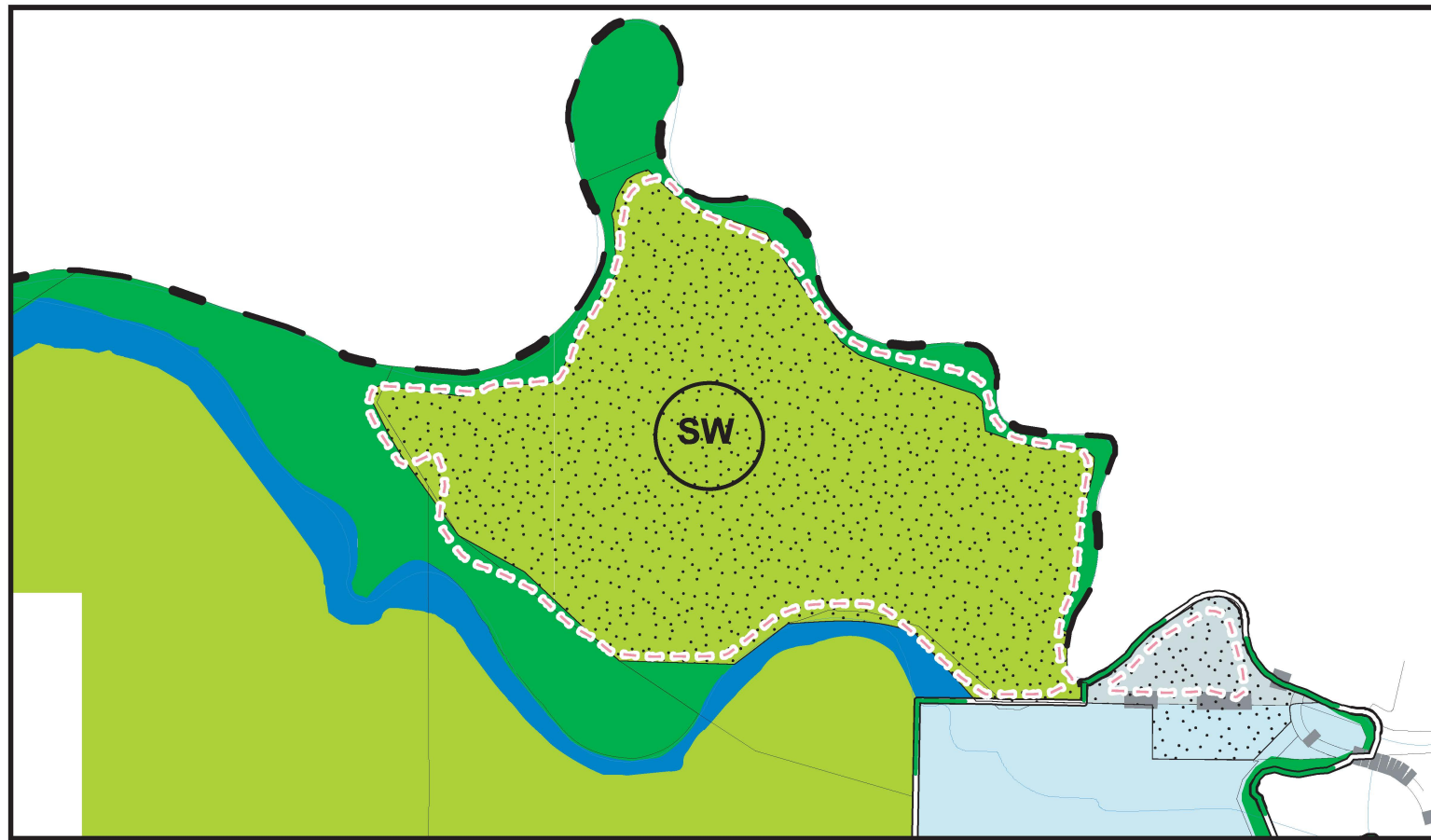
The NISL permits show this D-shaped area being used for waste disposal in the future. It is now proposed that the D-shaped area not be used for waste disposal in the future. Instead, future uses of the D-shaped area are proposed to include support uses for the waste disposal and recycling activities continuing to occur at the Recyclery and on the remainder of the NISL site. The uses proposed to be allowed on the D-shaped area are listed in Table 1.4-1. After the landfill closes, the D-shaped area could continue to be used for some combination of the activities listed in Table 1.4-1, including a corporation yard for the hauling company. It is not proposed that the D-shaped area would be used for any uses not affiliated with waste management and/or recycling.

1.4.1.2 *The Recyclery*

The Recyclery, which is a Materials Recovery Facility (MRF) or recycling facility, is located on 10 acres of property owned by Los Esteros Ranch, a partnership. The Recyclery property is the subject of a long-term lease to BFIC, which expires in 2018. BFIC has permits issued by the City and the state to operate a MRF, a Processing Facility, and a Transfer Station on the Recyclery property. BFIC built the Recyclery on the property. The first Solid Waste Facilities Permit was issued for its operation in 1991, and it has operated continuously since that time. The Recyclery is also located within the boundary of the *Alviso Planned Community* on the General Plan Land Use/Transportation Diagram, is designated *Public/Quasi-Public* on the General Plan, is within the City's USA, and is zoned A(PD) – Planned Development Zoning District (refer to Figure 1.0-5).

⁸ Unpaved access exists between the Newby Island property and the adjacent San José/Santa Clara Water Pollution Control Plant. This non-public access is only used by employees of the City and other regulatory agencies. The project would not impact this access.

Revised Table 1.4-1: Land Use Regulations^{1, 2, 3}					
Land Use		Landfill Pre-Closure	Landfill Post-Closure	D-Shaped Area⁴	Recyclery⁴
1.	Composting	P	P	NP	NP
2.	Landfilling	P	NP	NP	NP
3.	Solid Waste Transfer Facility	NP	NP	NP	P
4.	Mixed Recyclables Processing (e.g. bottles, cans)	NP	NP	NP	P
5.	Organics Processing	P	P	NP	P
6.	Household Hazardous Waste Facility (including electronic waste and universal waste) ⁵	P	NP	P	P
7.	Education and Training Center	P	P	P	P
8.	Passive Open Space (trails, wildlife observation, public facilities)	NP	P	P	P
9.	Landfill Gas Management Systems and Associated Ancillary Equipment/Facilities	P	P	P	NP
10.	Non-Putrescible Material Recovery (e.g. construction and demolition debris, mattresses, carpet) ⁵	P	P	P	P
11.	Above-Ground Storage of Hazardous Material	P	NP	P	P
12.	Fueling Station (private/non-commercial)	NP	NP	P	NP
13.	Office and Employee Facilities ⁵	P	NP	P	P
14.	Outdoor Bin and Equipment Storage ⁵	P	NP	P	NP
15.	Public Drop Off Area	P	NP	P	P
16.	Scaling/Weighing Equipment and Facilities	P	NP	P	P
17.	Truck and Equipment Vehicle Parking (including trucks, tractors, mobile equipment) ⁵	P	NP	P	P
18.	Vehicle and Equipment Repair Facility	NP	NP	P	P
19.	Container Repair Shop and Bin Painting Booth (indoor)	NP	NP	P	P
20.	Vehicle/Wheel/Equipment Wash System	P	NP	P	P
<p>P = Permitted Use NP = Not Permitted Use</p> <p>Note 1: Bold land uses are primary land uses. All other uses are considered secondary.</p> <p>Note 2: For term definitions, refer to Section 11.0 of the Draft EIR and Title 20 of the San Jose Municipal Code, as amended.</p> <p>Note 3: Landscaping, paving, parking, and other similar site improvements incidental to the above land uses are permitted, as appropriate.</p> <p>Note 4: Allowable uses in the D-Shaped Area and Recyclery also include permitted and conditional uses of the HI Heavy Industrial Zoning Districts per Title 20 of the San Jose Municipal Code, as amended.</p> <p>Note 5: Uses only permitted in Pre-Closure Landfill area if the activity is located at midway bench screened by landscaping berm, or equivalent area with no off-site visual impacts.</p>					



Project Area



Public/Quasi-Public



Public Parks and Open Space



Private Open Space



Solid Waste Disposal Site



Light Industrial



Urban Service Area Boundary



Community Boundary



Approximate Limit of Waste

Source: City of San Jose,
Planning Services Division, February 2006

EXISTING GENERAL PLAN AND ALVISO PLANNED COMMUNITY LAND USE DIAGRAM

FIGURE 1.0-5

The existing PD zoning for the Recyclery (File No. PDC93-032 and subsequently rezoned by PDC93-044) allows two phases of development. Phase I may include up to three buildings that may be used for recycling and administration, as defined:

Office and administrative functions, a public recycling and buyback center, a recycling education center, and a materials recovery center. The materials recovery center will receive a number of recyclable solid waste materials for processing. Materials will be extracted from the mixed waste stream through a series of mechanical and manual sorting systems. These materials will be composed primarily of one or more of the following components: paper, plastic, glass, metal, wood, or rubber.

No burning of waste materials or recycled commodities is allowed by the existing zoning.

Phase II of the development allowed by the existing PD zoning covers the paved area west of the main Recyclery building and the property immediately south and east of the building. Phase II could include expansion of the existing Recyclery building, or the area can be used for preliminary processing of green waste and/or wood waste. The zoning defines in detail the purpose of the preliminary processing of green waste and/or wood waste, what actions it can include and what are the limitations on the activities. It also states that:

The area of the property will not be used to process food waste or solid waste other than wood waste and/or green waste. Contaminants (which are defined to mean anything other than wood waste and/or green waste) found in loads of wood waste and/or green waste will be removed and either disposed at a sanitary landfill or processed at the Recyclery for recycling. Hazardous materials found in loads will cause such loads to be returned to the generator or, if the generator cannot be identified, the hazardous materials will be received and disposed in conformance with State and Federal regulations.

Processing of food waste is not allowed on the Recyclery property by the existing zoning, whether inside or outside of the Recyclery building. Refer to Section 1.4.3.1 for a discussion of the proposed changes to the permitted operations at the Recyclery.

As summarized in the footnote to Table 1.4-1, the proposed PD zoning distinguishes between those uses which are primary uses and those which are ancillary within each subarea. The primary use on the NISL portion of the site is the sanitary landfill. All other uses and activities which support the landfill use and are located on the landfill site are *ancillary* to the landfill use itself. There are a few land uses that are or may be located on the landfill site which are not part of the landfill operation. Those uses are also defined as “primary,” meaning they are not supportive or ancillary to the landfill.

1.4.2 Waste Types and Quantities

General wastes, or non-hazardous solid wastes which require no special handling prior to disposal are accepted at NISL and include mixed municipal wastes (residential and commercial), industrial wastes, agricultural wastes, green and wood waste, and construction/demolition wastes. Other non-hazardous wastes and universal wastes accepted at NISL for recycling, beneficial reuse,⁹ or disposal

⁹ Beneficial reuse refers to use at a landfill of a waste product for another purpose, sometimes requiring minor processing. Beneficial reuses of waste material received at Newby Island include utilization for alternative daily cover, alternative intermediate cover, final cover foundation layer, liner operations layer, leachate and landfill gas collection system, construction fill, road base, wet weather operations pads and access roads, and soil amendments

include tires, contaminated soils,¹⁰ dredged soils, biosolids, other sludges, construction and demolition (C&D) debris,¹¹ and carpet. The landfill is allowed to accept treated wood waste for disposal.¹² High liquid content wastes, or wastes that contain more than 50 percent water by weight, are not accepted at NISL except for sludges that meet specific criteria. Sludges are accepted for disposal in the lined area of the landfill that also has a leachate collection and recovery system. Designated wastes and hazardous wastes are not accepted at NISL.

Materials that come in the gate of NISL include waste that is disposed in the landfill; clean soil that is used for cover and for temporary roadways; C&D debris that is sorted, recycled, and processed for re-use both on-site and elsewhere; and materials that are used for alternate daily cover (ADC), which include but are not limited to biosolids from the WPCP, processed C&D debris,¹³ contaminated soil, green waste, and over-sized organic materials from the on-site composting operations. In addition to C&D waste, bulky recyclables are sent to NISL and either recycled or diverted for beneficial use, including appliances, tires, carpet, and cardboard. Incoming organics¹⁴ received at the landfill are processed (*i.e.*, ground) and utilized for beneficial uses (all of which constitute “recycling” under state law). These uses include composting, erosion control on-site and off-site, biofuel, direct land application (mulch), and ADC.

NISL’s current Solid Waste Facility Permit (SWFP) allows it to accept an annual average of 3,260 tons of waste disposed per day and a maximum of 4,000 tpd for disposal on any one operating day. The current SWFP tonnage limits equate to a maximum of approximately 1.2 million tons of solid waste that could be disposed at NISL per year.

The Recyclery’s SWFP is for a MRF, a Transfer Station, and a Processing Facility. The Recyclery processes source separated recyclables including paper, glass, plastics, metals, wood, green waste and yard trimmings, and mixed commercial recyclables (*e.g.*, mixed paper, newspaper, office paper, plastic, glass, and aluminum). Its SWFP identifies its maximum permitted capacity as 1,600 tpd, independent of NISL’s permit. Note that these uses are different than the uses permitted by the existing PD zoning and permits issued by the City of San José and summarized in Section 1.4.1.2, above.

The Recyclery does not receive or process MSW (or “garbage”). The City’s PD Zoning and Permit for the Recyclery do not allow MSW. As quoted at the end of Section 1.4.1.2, the MRF is allowed to receive “a number of recycle solid waste materials.” The processing will extract individual materials from this “mixed waste stream.” There is no evidence that environmental review has been completed

for erosion control and landscaping. Beneficial reuse qualifies as recycling for state diversion goals, but it is used in this EIR to mean that it is re-used on the project site.

¹⁰ NISL accepts soils contaminated with hydrocarbons and/or metals that are classified as “special waste,” not “hazardous waste.”

¹¹ Construction and demolition (C&D) wastes/debris includes the waste building materials, packaging and rubble resulting from construction, remodeling, repair and demolition operations on pavements, houses, commercial buildings and other structures. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)

¹² Treated wood waste is wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act.

¹³ Processed C&D is material meeting the definition contained in Title 14 that can be processed (*e.g.*, screened and/or ground) and used for Alternative Daily Cover.

¹⁴ Organics are materials that are or were recently living, such as leaves and grass (green waste) and wood (wood waste). Organics can also include agricultural crop residues and food scraps. (CIWMB. “Glossary of Terms.” 12 August 2009. Available at: <http://www.ciwmb.ca.gov/LGcentral/Glossary/default.htm>)

for the Recyclery to receive or process MSW. Additional environmental review would be required for the Recyclery to receive or process MSW. In addition, the Recyclery does not accept non-hazardous industrial wastes (*i.e.*, wastes that have physical properties which could cause health and safety or operational problems without special handling), construction/demolition wastes, high liquid content wastes, designated wastes, hazardous wastes, or other wastes requiring special handling.

While waste quantities are a critical element in defining and regulating the operations of waste management facilities, they are the variable most subject to changes not under the control of the facilities' operators. Since the passage of AB 939 in 1989, substantial changes have occurred in the amount and types of waste generated and disposed in most communities in California. In addition to an overall trend to recycle or reduce wastes, other factors that cause substantial variations in MSW coming in to a landfill include the economy (a depressed economy reduces waste generated), technologies (reduced packaging, increased reliance on electronic communications, etc.), changing styles and fashions (especially packaging), and regulations.

Since 1998, MSW quantities disposed at Newby Island have varied from annual averages of 2,089 to 2,560 tpd. In 2006, the average tpd for the year was 2,142. In 2007, the average tpd was 2,208.

1.4.2.1 Waste Quantities and Traffic Volumes

While the quantity of MSW coming in the gate at Newby Island has generally decreased over the last 10 to 15 years, the variety and quantities of other materials coming in the gate have generally increased. That said, variations from month to month and year to year can be substantial. Table 1.4-2 summarizes tonnages and total vehicle trips that entered the project site and crossed a scale for the months of October 2006 and October 2007. The high day for tonnage of 14,021 tons at NISL was in October 2006. Tons disposed that day were 2,226, with the rest of the materials entering the site for purposes other than for disposal. Those two months were chosen to illustrate the substantial variations that occur, even during the same times of the year. The trip numbers in this table do not include visitors, employees, or staff of regulatory agencies.

Table 1.4-2: Comparison of Tonnages and Traffic in October 2006 and 2007								
	NISL				Recyclery			
	Tons		Trucks		Tons		Trucks	
	10/06	10/07	10/06	10/07	10/06	10/07	10/06	10/07
High Day	14,021	9,841	1,269	927	1,292	1,225	277	247
Low Day	1,944	680	341	142	95	171	52	14
Average (1)	8,766	5,874	923	624	976	893	208	150
Average (2)	7,352	5,116	774	543	818	778	175	130
Totals	227,916	158,598	23,998	16,848	25,376	24,111	5,408	4,050
Notes: Data supplied by Allied Waste. Average (1) is based on operating days—26 in 10/06 and 27 in 10/07. Average (2) is based on calendar days of the month—31 each month.								

While tonnage and number of vehicle trips are clearly related, they are not directly linked. The greatest number of vehicle trips does not necessarily occur on the highest volume days. There are always variations, sometimes substantial variations, in the types and sizes of vehicles. A pickup

truck is not going to carry the same tonnage as a garbage collection route truck or a bottom dump truck carrying soil, so tonnages will vary independently of the traffic.

1.4.2.2 *Proposed Traffic Volumes*

The owners and operators of Newby Island cannot precisely predict how future economic conditions, regulations, and land use changes in the region will affect waste quantities and the mix of materials that come in the gate of Newby Island. While waste quantities have declined over the last ten years, 2007 had a slightly higher average tpd than 2006 (refer to Table 1.4-3). Additionally, opportunities for recycling and waste diversion are generally increasing. The proposed PD zoning does not include a change in the gate capacity tonnages for either of the permitted facilities (landfill and Recyclery). In other words, the existing permit limitations on maximum average incoming tonnage and on daily maximums will continue to be effective. The zoning proposes to limit the total number of vehicles to a number that generally represents existing conditions (refer to **Section 3.3 Transportation** for more detail and discussion about existing traffic conditions). The SWFP would state the proposed traffic limit.

Table 1.4-3: 1998 – 2007 Summary of NISL’s Annual Average Tons per Day of Waste										
Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Average TPD	2,560	2,352	2,115	2,102	2,089	2,104	1,982	2,020	2,142	2,208

There are (as discussed above and in **Section 3.3 Transportation** of this EIR) substantial variations in daily traffic from day to day, month to month, season to season, and year to year. The proposed maximum number of inbound material-carrying vehicles on a daily basis is 1,546, which is based on the number of trucks experienced in October 2006 (1,269 vehicles carrying material to the landfill site and 277 vehicles carrying material to the Recyclery). This includes trucks carrying MSW to the landfill, trucks carrying recyclables (including C&D debris) to both NISL and to the Recyclery, and trucks carrying green waste for composting.

As shown in Table 1.4-2, average daily tonnages in October 2006 were higher than in October 2007. This was probably at least partly due to economic conditions. Nevertheless, as stated previously, average daily tonnages of MSW received during the entire year 2006 were slightly less than the daily averages for all of 2007 (see Table 1.4-3). The traffic identified for both months are total vehicles hauling material to the landfill and the Recyclery, including vehicles hauling recyclables, MSW, and materials for on-site reuse such as soil and concrete. It does not include employee vehicles, vendors, hauling company operations trucks, or construction-related traffic.

The proposed project traffic volumes are therefore intended to represent existing conditions but, unlike under the existing conditions, the project proponent is proposing a limit so that traffic volumes cannot grow beyond the number of haul vehicles identified. October 2006 was a relatively high traffic month and would, therefore, allow for variations likely to occur as more MSW shifts to recycling or waste diversion streams. It was not an extreme variation, however, and is believed to fairly represent typical waste and traffic volumes for recent years.

1.4.3 Existing and Proposed Operations

NISL is permitted under its SWFP to operate 24 hours a day. According to the landfill operator, this allows flexibility for the landfill operator to adjust its receiving hours as needed, based on demand.¹⁵ Currently, the operating hours for the landfill and Recyclery are 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday. The landfill is closed on Sundays, Thanksgiving, Christmas, and New Year's Day. Presently, the landfill operator does not foresee demand changing significantly in a manner that would suggest any change to operating hours.¹⁶

The following discussion contains a summary description of all of the substantial elements of the existing operations on the entire project site, most of which are anticipated to continue through the life of the landfill. If the PD zoning is approved as proposed, the first PD Permit processed by the City would be a "Master" Permit that formally recognizes the existing uses.

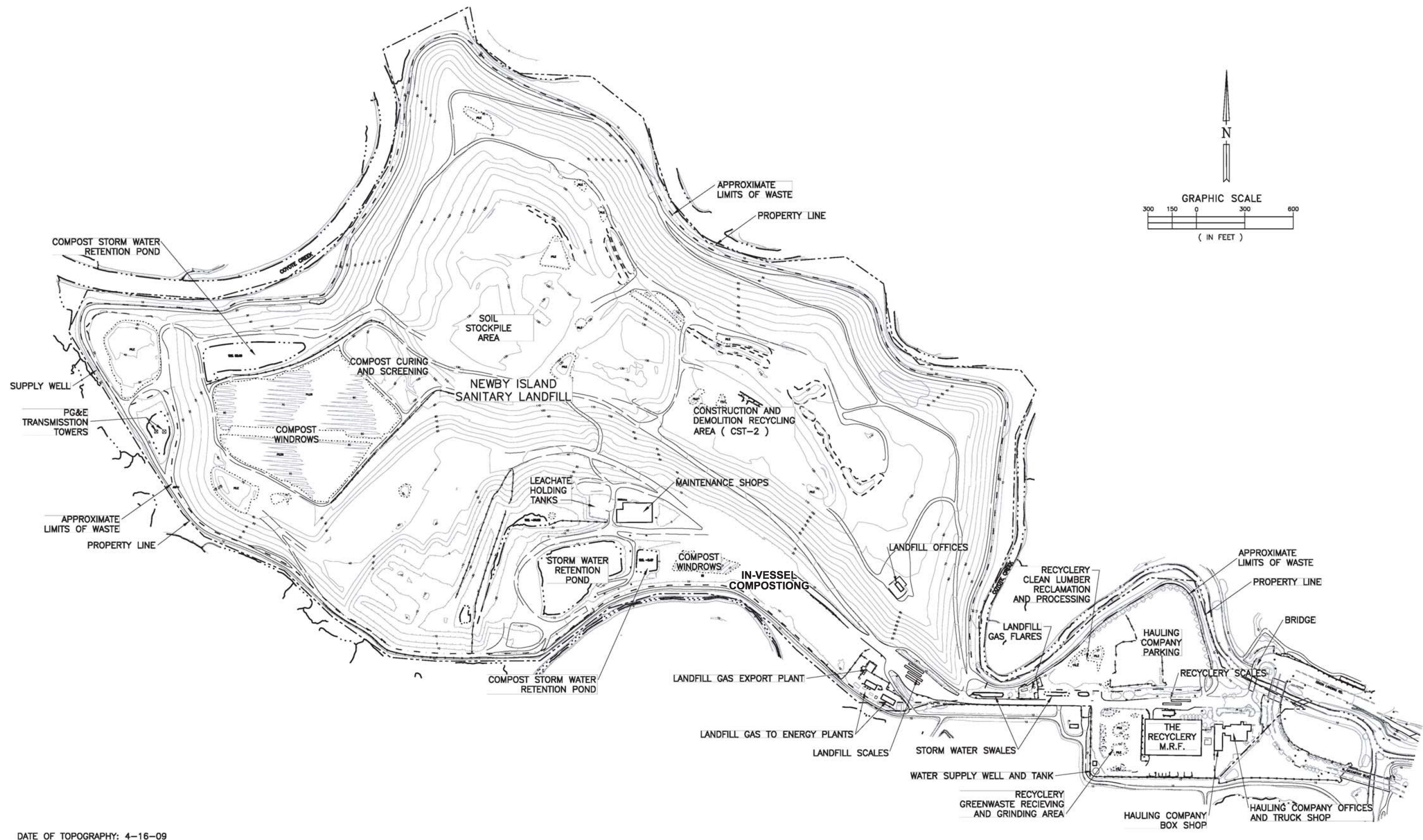
The existing site plan for NISL is shown on Figure 1.0-6. The proposed land use plan for the site is shown in Figure 1.0-7. At those locations where changes from current and/or past practice would be allowed by the proposed PD rezoning, the changes proposed are described as "Examples of Proposed Activities." All of the land uses proposed by the zoning for each of the subsections of the site are listed on Table 1.4-1.

The description of most of the existing facilities, specific activities, and operations (including security, salvaging operations, nuisance control, litter control, and site drainage) on the landfill portion of the project site are summarized from the most recently revised *Joint Technical Document Permit No. 43-AN-0003* (JTD) for the Newby Island Landfill. The current approved JTD was prepared in February 2007. The JTD was prepared in conformance with state and federal regulations, and submitted to the oversight agencies to document conditions on the site and consistency with permits. The JTD includes a great deal more detail about some of the features and activities than is included in this Project Description and a copy may be reviewed in the office of the City of San José Department of Planning, Building and Code Enforcement during normal business hours. The JTD is also on file with the LEA, the San Francisco Bay Regional Water Quality Control Board (RWQCB), and the CIWMB.

Much of the description of the Recyclery is based on the *Report of Station Information*, prepared by BFI in March 1996 and updated in June 1997 (which is the most recent update). According to the applicant, the information in this document is current. Supplemental information on existing conditions at the Recyclery was provided by Allied Waste staff and from field observations.

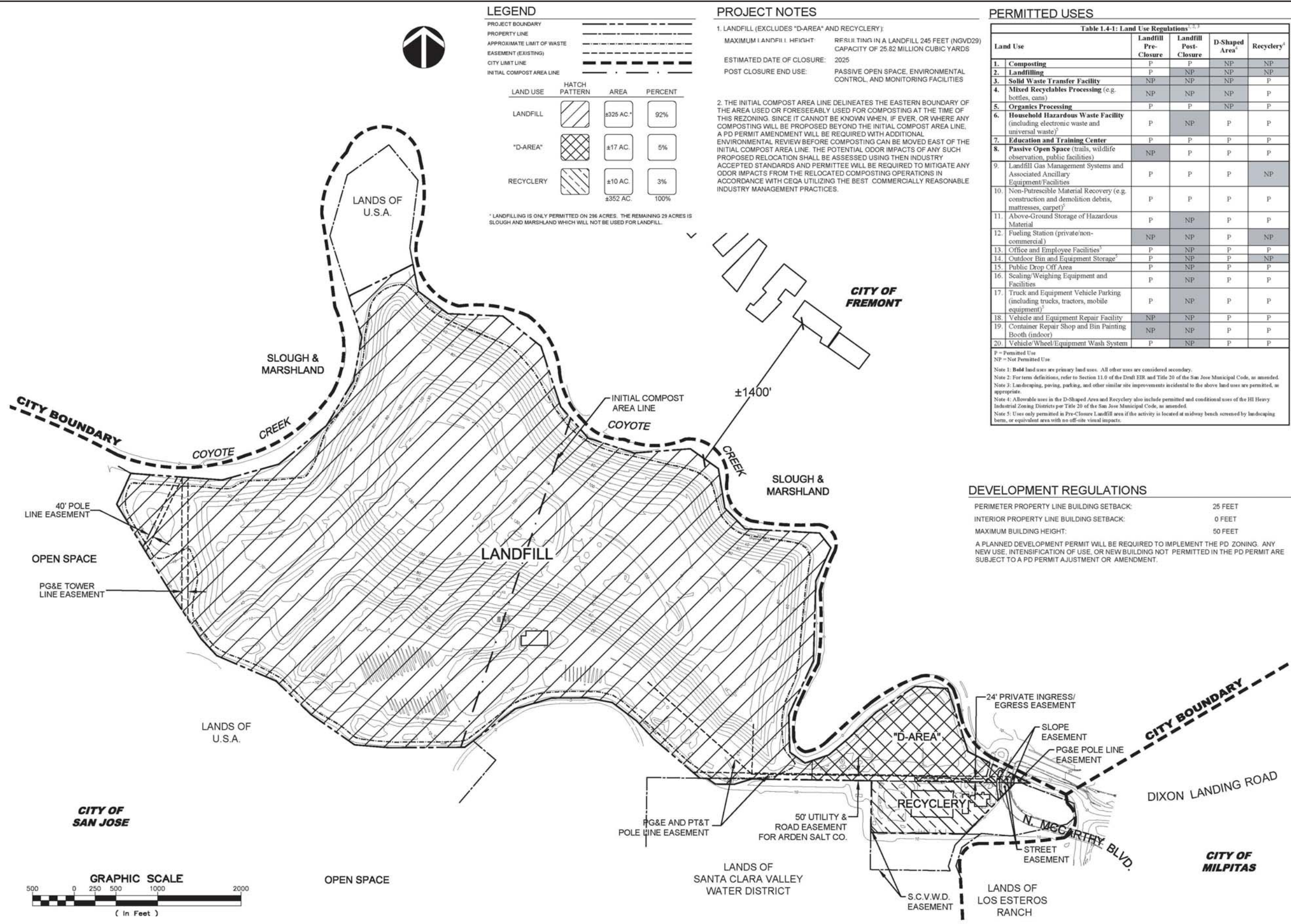
¹⁵ Gambelin, Donald. Email from Allied Waste. "Re: Newby – hours of operation." 20 May 2009.

¹⁶ Ibid.



EXISTING SITE PLAN

REVISED FIGURE 1.0-6



Source: HMM Engineers

Primary components of the combined facility are shown on Figure 1.0-6 and include:

- Materials Recovery Facility: The Recyclery
- Hauling Company Offices and Shop
- Recyclery/Landfill Scales
- Landfill Gas to Energy Plants/Landfill Gas Export Plant
- Landfill Gas Flares
- Landfill Offices
- Construction and Demolition Recycling Area
- Maintenance Shops
- Stormwater Detention Ponds
- Leachate Management System
- Fueling Facilities
- Composting and Compost Processing
- Waste Disposal Area

Each of these components is described briefly below.

1.4.3.1 *Materials Recovery Facility: The Recyclery*

As stated previously, the Recyclery is on a separate, leased 10-acre property, which is a portion of a 14.8-acre parcel (APN 015-47-001). The existing PD zoning for the Recyclery parcel allows recycling and administration, outdoor processing of green waste and wood waste, and storage. The existing SWFP issued by the City of San José for the Recyclery says that permitted operations are: MRF, Processing Facility, and Transfer Station. Supporting documents to the permit list waste types as construction/demolition, mixed municipal, tires, industrial, green materials.¹⁷ The site is prohibited from accepting any liquid wastes, designated wastes, unknown or unidentified wastes, dead animals, medical wastes, or hazardous wastes. The PD Permit states regarding the uses permitted on site that “The materials recovery center will receive a number of recyclable solid waste materials for processing. Materials will be extracted from the mixed waste stream through a series of mechanical and manual sorting systems.” While a transfer station is listed as a permitted use on the SWFP, the transfer station that is permitted by the existing PD zoning is based on the definition in the City’s Zoning Ordinance of a “recycling transfer facility” (Section 20.200.1280). This EIR provides environmental clearance for operation of a solid waste transfer facility¹⁸ on the Recyclery property. A PD Permit will be required for the operation of that facility. Subsequent environmental review will be conducted as part of that PD Permit to analyze and disclose the impacts associated with the receiving facility (*i.e.*, based on the ultimate destination of the waste being transferred).

The Recyclery is located near the primary entrance to the site, on the south side of the main access road. The Recyclery operation is zoned and has a PD Permit to process source separated materials¹⁹ for recycling including wood waste and green waste, and intermingled glass, metals, plastic, and other recyclables. Outside the Recyclery building, on a paved area west of the building and within the Recyclery site boundary, green waste, food waste, and wood waste (including lumber) are currently stockpiled, ground and processed (refer to Recyclery Greenwaste Receiving and Grinding Area on Figure 1.0-6). Some of the lumber received at the Recyclery is processed (ground, screened and colorized), for sale off-site (see Recyclery Clean Lumber Reclamation and Processing area on

¹⁷ Permit # 43-AN-0014.

¹⁸ A solid waste transfer facility is a facility that receives primarily solid waste materials, from commercial vehicles for the purpose of storing and handling prior to transferring to another facility. Such a facility may have limited recapture of recyclable materials as defined in the City’s Zoning Ordinance. (City of San José. Zoning Ordinance. 20.200.1280.)

¹⁹ In this context, “source separated” means that the recyclables are separated from garbage or MSW by the generator, are collected separately by a hauler and delivered to the MRF.

Figure 1.0-6). The organic materials²⁰ that are to be composted are transported to the compost windrow area on the landfill for composting (see composting windrows on Figure 1.0-6), curing, and screening. Some of the wood waste that is not dimensional lumber is also ground and sold off-site for fuel.

As described in Section 1.4.3.2, hauling company offices and vehicle maintenance facilities are located in the paved area east of the Recycling building in temporary structures. Equipment (bins, waste containers, etc.) are also stored there. Existing land uses that are not consistent with the existing zoning are discussed in **Section 3.1 Land Use** of this EIR.

In 1995, a lease was executed between BFI and the County to place a household hazardous waste (HHW)²¹ drop-off and storage facility on the Recyclery property. The facility would accept batteries, oil and paint, and would store the materials in a separate building located in what was the parking lot north of the main Recyclery building. There is such a building at the location indicated in the lease records, but it has never operated as a HHW facility.

Examples of Proposed Activities: The Recyclery will continue to operate as a materials recovery (or recycling) facility on the existing parcel separate from the landfill. Consistent with the City's Zoning Ordinance definition, mixed "recyclable materials" will be processed at the Recyclery. As markets, market demands, recycling programs, and recycling technologies change over time, it is likely that the materials handled by the Recyclery, the materials recovered, and the technologies used to process them will change accordingly. These future conditions cannot be foreseen at this time and may require subsequent development permits and CEQA analysis to determine if any of the changes in operations could produce greater environmental impacts. Wood waste and green waste will continue to be processed and/or managed on the landfill site.

The rezoning proposes to include preliminary processing of food waste (*i.e.*, putting feedstock through a grinder) as a permitted activity on the paved area west of the Recyclery. The processed food waste would continue to be composted on the NISL site. The zoning also proposes to allow a HHW drop-off and collection site as an allowed use. A solid waste transfer facility is also proposed to be included in this rezoning as a future use. Transfer stations can be used to consolidate waste from collection vehicles into larger trucks for more efficient transport to a distant sanitary landfill or other waste management facility. There is not sufficient room on the Recyclery parcel to simultaneously operate all of the uses proposed, including a solid waste transfer facility. Details about the future solid waste transfer facility (size, operation, location of where materials would be transferred to) are currently unknown. The approval of the proposed rezoning would allow for the solid waste transfer facility use on-site; however, a PD Permit will be required when sufficient details about the solid waste transfer facility are known (*e.g.*, details regarding the receiving facility) and before construction and operation of the facility on-site could occur. Subsequent environmental review will also be required at the PD Permit stage for the solid waste transfer facility to confirm there would be no new or substantially more severe impacts than those identified in this EIR.

Some of the recyclable materials separated out of mixed waste loads delivered to the landfill will also continue to be transferred to and processed inside the Recyclery building, consistent with current

²⁰ "Organic materials" in this context refers to green waste and food waste.

²¹ Household hazardous waste are hazardous waste materials discarded, typically in small quantities, by households (as opposed to large quantities disposed by businesses). Typical household hazardous wastes include used motor oil and oil filters, antifreeze and other vehicle fluids, paints and varnishes, pesticides, and cleaning supplies. (CIWMB. "Glossary of Terms." 12 August 2009. Available at: <http://www.ciwmb.ca.gov/LGcentral/Glossary/default.htm>)

operations. The rezoning also proposes that BFIC be allowed to continue uses on the Recyclery property that are not directly related to the operation of the Recyclery, as described below.

1.4.3.2 *Hauling Company Offices and Shops*

Allied Waste Industries, Inc. operates as a waste collection company that collects MSW from commercial and residential sources, and maintains their offices, truck parking, and maintenance facility at NISL and the Recyclery. The offices and maintenance facility are located in two buildings located on part of the Recyclery property, south of the main access road. Trailers that are additional office space and employee locker rooms are presently located on the D-shaped area that is part of the NISL parcel, on the north side of the main access road and directly across from the Recyclery and hauling company offices. Waste collection equipment and trucks, as well as employee vehicles, are also parked on the D-shaped area. None of these uses are allowed on the Recyclery property by its existing PD zoning and some of the uses are not allowed by either zoning or permits on the D-shaped area.

Examples of Proposed Activities: In the proposed PD rezoning, planned operations would continue to include the hauling company's vehicle and equipment maintenance facility and offices on the D-shaped area and the easterly portion of the Recyclery property, although some reconfiguration of the uses (*i.e.*, the offices and maintenance facility as well as the recycling activities) is likely to promote operating efficiencies. Over time, the existing office trailers may be replaced with permanent buildings, which will require a PD Permit. (See Table 1.4-1 for the list of all of the uses that would be permitted on each of the subareas.)

1.4.3.3 *Recyclery/Landfill Scales*

There are a total of four scale houses and six scales that serve the landfill and Recyclery. They are all located on the main access road west of the D-shaped area. The landfill has three scale houses and four scales (three scales are for inbound traffic and one scale is for outbound traffic). The Recyclery has one scale house and two scales (one scale for inbound loads and the other for outbound loads). At least one scale house and scale is manned at all times during operating hours.

Examples of Proposed Activities: It is anticipated that the four landfill scales will need to be moved east, closer to the site entrance, as landfill construction continues. Depending on the final configuration, the scales may be located on the D-shaped area to accommodate queuing.

1.4.3.4 *Landfill Gas to Energy Plants/Landfill Gas Export Plant/Flares*

Gas Recovery Systems, Inc. (GRS) currently owns and operates an electricity generating facility on the southeastern portion of the landfill site. The facility collects landfill gas through a system of wells and headers. The landfill gas produces an average of 4,200 kilowatts (kW) per day of electricity. The facility is a 4.2 megawatt (MW) plant. Additionally, GRS treats and compresses up to 1,500 CFM of landfill gas for pipeline export to the WPCP where it generates electricity for use in wastewater treatment operations. GRS can currently process a total of 3,700 cubic feet per minute (CFM), and additional plant capacity can be added as needed.

NISL currently maintains two landfill gas destruction flares as back-up to the GRS facility. Landfill gas must be destroyed or otherwise properly managed for air quality purposes. The GRS facility accomplishes this but must be backed-up by other landfill gas destruction devices. The existing

flares are located near the westernmost point of the D-shaped area. Historically, NISL has not had to operate the flares when the GRS facility is operating. The flares are, however, operable as necessary.

Examples of Proposed Activities: The GRS facility is located within the designated landfill development area and accordingly will need to be relocated when the area is developed for waste disposal. The facility will be relocated to the D-shaped area or elsewhere on the landfill. The plant generating capacity will be expanded in the future to utilize additional landfill gas for energy generation. Future expansion of the GRS facility will require a PD Permit from the City of San José. If the expansion would result in any new conflicts or significant impacts, a subsequent CEQA document will need to be prepared at that time. The landfill operator would also like to utilize some of the energy generated by the plants for on-site operations in the future. The flares will remain operable for regulatory conformance; as landfill gas production increases, additions to the GRS plants' capacity or new capacity will be brought online.

1.4.3.5 *Landfill Offices*

The NISL offices are located on the northeast corner of the landfill. There are two office trailers and parking for employees and visitors adjacent to the trailers.

The offices are not proposed to be moved until the site is ready to receive its final cover. However, the offices could be relocated on the landfill in association with future site activities.

Examples of Proposed Activities: The buildings used for NISL offices are portable. The offices and parking may be moved as necessary to accommodate landfill development and final grading up to and including installation of final cover. Criteria for relocation will include off-site visibility and compatibility with adjacent uses.

1.4.3.6 *Construction and Demolition (C&D) Recycling Area*

A salvage/recovery program for C&D waste is located in the central portion of the landfill. Truckloads of C&D waste are directed to that part of the site to unload. The operation includes sorting, separation of materials by types, and some on-site processing. Examples of processing would be concrete crushing to create base rock and wood grinding. Currently there is an elevated picking line for extracting recyclable or reusable materials from mixed loads. Materials recycled from the mixed loads currently include metal, drywall, wood, roofing, cardboard and other construction paper products, and plastics.

Asphalt, concrete, dirt, and rock may be diverted and stockpiled for use onsite for road surfacing or to construct working pads.

Examples of Proposed Activities: The equipment used for recycling C&D waste is not fixed. The processing operation will be moved as necessary to accommodate landfill development and final grading up to and including installation of final cover. Criteria for relocation will include off-site visibility and compatibility with adjacent uses. As with all other recycling operations, it is anticipated that changes in both the materials diverted and the equipment used to process the materials may occur in the future to reflect market demands, advances in processing technology, and changes in the incoming material stream, none of which can be specifically foreseen at this time.

1.4.3.7 *Salvaging at the Landfill*

Salvaging at the working face of the landfill is a traditional activity that occurs at most operating landfills. In modern landfill operations, this refers to managed salvaging on behalf of the landfill owner/operator, and is conducted to increase diversion from landfilling. All salvaged materials are tracked and reported as diverted from disposal. “Informal” salvaging done by either employees or customers on their own behalf is not allowed. Salvaging may occur from the active filling area, or landfill employees may direct loads (such as C&D waste) to a designated area away from the active filling area. Salvage is usually stockpiled near the active area and is subsequently removed for processing and recycling.

Salvage activities would likely not significantly change during the landfill’s operating life.

1.4.3.8 *Landfill Maintenance Shop*

A 120-foot by 80-foot corrugated metal building in the central portion of the landfill site is used for landfill equipment and vehicle repair and maintenance. Hazardous materials used for equipment maintenance are stored in the building in accordance with the site’s Hazardous Materials Management Plan (HMMP). As described in Section 1.4.3.11, there is a fueling station next to the shop building.

Examples of Proposed Activities: The maintenance shops may be relocated onto a different part of the landfill footprint or to the D-shaped area when landfill phasing requires that waste be disposed at their current location. The fueling station will be relocated with the maintenance facility.

1.4.3.9 *Stormwater Detention Ponds*

Most of the surface stormwater runoff and subdrain water within the facility is diverted and channeled in a series of drainage ditches and swales to the main stormwater retention pond located in the southern portion of the site. Runoff from the Recyclery (including the food waste area) is also conveyed to the main stormwater retention pond. The water is tested quarterly to confirm that it meets standards set by the Regional Water Quality Control Board (RWQCB) for discharge. Water is not discharged until it meets the appropriate standards.

The runoff from the compost areas are conveyed to separate compost retention ponds adjacent to the compost areas. The runoff in these ponds are used to water the compost windrows (see compost stormwater retention ponds on Figure 1.0-6).

Examples of Proposed Activities: The existing main stormwater retention pond located in the southern portion of the site will be replaced by two new ponds located along the western and southern site boundaries. New stormwater lines will be laid to transport stormwater to the ponds, as illustrated in the PD Zoning plan set. In addition, consistent with Best Management Practices, the landfill will increase the amount of runoff diverted to the retention basins (e.g., instead of runoff from the northern portion of the landfill flowing directly to the creek, the runoff would be directed to a retention basin first). Therefore, at ultimate buildout of the stormwater management system, the retention pond capacity would increase from 69 to 87 acre feet. The new stormwater management system (two new ponds and stormwater lines) would be designed to the same performance level as the existing stormwater management system and will be able to handle a 24-hour, 100-year storm.

1.4.3.10 *Leachate Management System*

Leachate is any liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. Leachate from all 14 sumps on the landfill is pumped into mobile storage tanks currently located adjacent to the landfill maintenance shop in the center of the site, where it is then loaded into tanker trucks for transport to a permitted treatment plant. The site currently generates leachate at an average rate of approximately 7,404,000 gallons per year (2006).

Examples of Proposed Activities: The leachate holding tanks and ancillary facilities may be relocated to the D-shaped area. Leachate may be conveyed in an existing pipeline to the adjacent WPCP. A new pump station would be required to pump the leachate through the pipeline to the WPCP. The pump station would be located next to the GRS power plant where the head of the pipeline is located (see Figure 1.0-8). The pump station would likely consist of two electric pumps (one active and one spare) to drive leachate through the pipeline to the WPCP. It is estimated that the pump station would fit on a concrete pad about 15 feet by 30 feet and would be surrounded by containment features to prevent accidental releases of leachate. The pump station would also include a control system that would have alarm features to notify site personnel of system faults or high liquid levels in tanks.

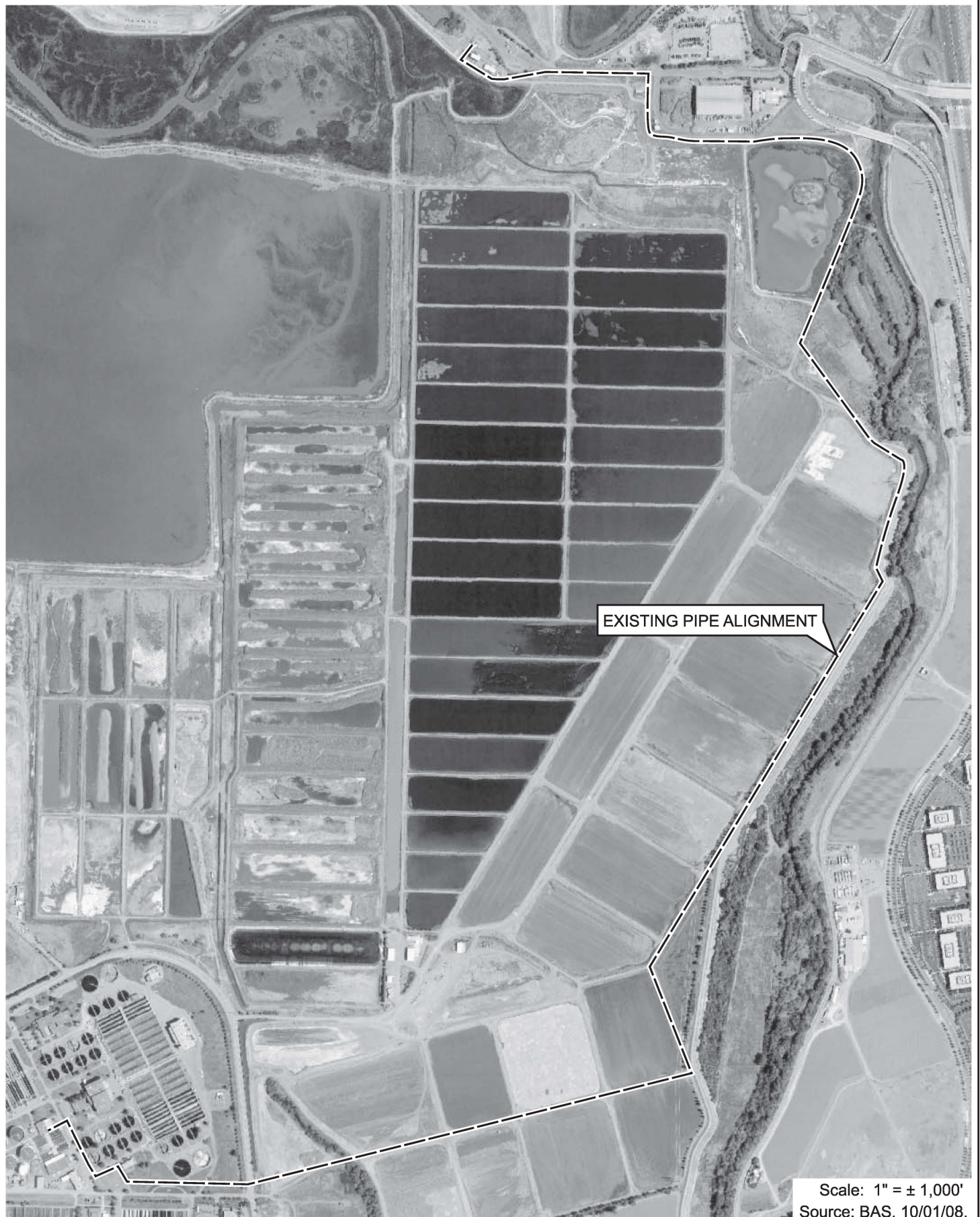
1.4.3.11 *Fueling Facilities and Hazardous Materials*

An 8,000-gallon above ground diesel fueling station is located on the central portion of the landfill site near the C&D recycling area. The tank is used to fuel on-site equipment and to refill a 2,500-gallon diesel dispensing truck. Site vehicles are fueled at a 500-gallon above-ground unleaded fueling station located near the landfill maintenance building.

Hazardous materials collected during load checking and found on the working face are stored in a special container near the C&D recycling area. Other hazardous materials used or generated on-site are stored in tanker trucks and in double contained tanks in the shops.

Examples of Proposed Activities: The diesel fueling station may be moved to the D-shaped area. The 500-gallon fueling station tank will be moved if the maintenance building is moved, which would require a PD Permit and subsequent environmental review.

The proposed rezoning includes the introduction of HHW turn-in and storage facilities, which may be located on any of the three subareas (landfill, D-shaped area, or Recyclery). Although not previously specified on the Recyclery PD zoning, a facility was proposed and planned for the site in 1996. While no details are currently available about precisely where such a facility might be located in the future or what population it might be designed to serve, it would need to meet then-current City, state and federal laws and regulations. Design features would have to include sufficient queuing space for vehicles dropping off HHW, a covered impermeable surface for unloading the materials, and a storage building that met appropriate fire and safety codes. The approval of the proposed rezoning would allow for the HHW facility use on-site; however, a PD Permit will be required when sufficient details regarding the HHW facility are known and before construction and operation of the facility on-site could occur. Subsequent environmental review may also be required at the PD Permit stage for the HHW facility to confirm there would be no new or substantially more severe impacts than those identified in this EIR.



EXISTING PIPE ALIGNMENT

FIGURE 1.0-8

1.4.3.12 *Composting and Compost Processing*

Based on the existing permit for the compost facility, the composting facility is 18 acres in size. The composting facility is located on the landfill and consists of the windrow composting area, the aerated static pile²² composting area, and the curing and screening area. The facility is also presently permitted for in-vessel composting, and in-vessel composting currently occurs on the southern boundary of the landfill east of the compost windrows (refer to Revised Figure 1.0-7)~~has occurred on-site in the past.~~²³

As described above, incoming organics, which include green waste, food waste, and wood waste are composted in open windrows.²⁴ After being processed (ground and mixed) on the paved area west of the Recyclery building, the organic materials are hauled in walking-floor trucks²⁵ to a location that is currently near the northerly end of the landfill. Most of the green waste is composted in turned windrows. The food waste is typically mixed with other compostable materials (such as green waste) and composted in aerated static piles. The compost is then screened to separate the finished compost from larger, unfinished materials. The screened finished compost is piled and cured in windrows. The larger unfinished materials are returned to the aerated static piles or are used as alternate daily cover (ADC) on the landfill.

After the compost has cured, most of the compost is loaded in transport trucks and hauled to customers off-site. A small portion of the completed compost may be kept on-site for sale to small quantity (*e.g.*, residential) customers. The compost operation processes a maximum average of 515 tpd of incoming feedstocks, with a maximum daily peak tonnage of 980 tpd. A maximum total of 53,500 tons can be processed quarterly and a maximum total of 160,680 tons can be processed yearly. After composting, materials are reduced in both weight and volume by as much as one-half.

Examples of Proposed Activities: The composting areas may be relocated to different areas of the landfill property in order to allow for landfill development. Compost windrows may be relocated anywhere on the landfill west of the Initial Compost Area Line (refer to Revised Figure 1.0-7). If the compost windrows are located east of the Initial Compost Area Line, a PD Permit/Amendment is required with additional environmental review. The potential odor impacts of locating the composting windrows east of the Initial Compost Area Line shall be evaluated and mitigated (refer to **Section 1.5** for more detail regarding the subsequent environmental review). In-vessel composting may be relocated anywhere on the landfill without further permit amendments or environmental analysis~~(which has been done on the site in the past) may be re-introduced.~~ The receiving and processing area may be co-located with the composting area in the future. The composting facility is not proposed to be expanded. Any expansion in the composting facility would require a PD Permit and subsequent CEQA review.

²² Aerated static piles are a method of composting that provides forced aeration during periods when the piles are not being turned.

²³ In-vessel composting is a method of composting biodegradable waste that occurs in enclosed spaces (metal containers, plastic bags, etc.).

²⁴ Not all incoming organic material is composted. Some incoming organic materials (wood waste and green waste) are also used for erosion control on- and off-site, biofuel, mulch, and alternative daily cover. Biofuel is material that can be used in a biomass plant for energy production. This would be wood and brush, not wood waste. Biofuel is also known as “hog fuel.”

²⁵ A walking-floor truck is usually a covered or enclosed truck or truck trailer that is “self unloading.” The floor moves toward the open end so the truck does not have to be tipped or dumped.

1.4.3.13 *Sanitary Landfill/Waste Disposal*

The sanitary landfill/disposal operation is currently focused in the southwest quadrant of the landfill site. This section of the landfill is lined in conformance with state and federal regulations. Under the existing permits, the landfill would continue to be filled in this southerly area until a maximum height of 150 feet (NGVD29) is reached, including final cover. Waste would also be disposed on the westernmost point of the landfill (west of the existing power lines) to a maximum height of 70 feet (NGVD29), including final cover. The existing permits allow landfilling to occur at the location currently occupied by the landfill flares and the existing scales. The D-shaped area could be filled to a maximum height of 70 feet (NGVD29), including final cover.

NISL's permitted refuse disposal area consists of approximately 313 acres, which includes the D-shaped area. The total facility capacity is determined based on the difference between the pre-landfill topography and the final disposal area contours. This capacity is expressed as "airspace." The existing design and associated permits specify that the landfill can only be constructed to elevation 150 feet (NGVD29). IDC estimates that the landfill property will be fully built out around 2025. With the current permits in place, landfilling activity would slow. In order to meet existing contractual obligations, inbound disposal volume would be restricted beginning in 2010.

Remaining currently designed and permitted airspace to be filled as of December 2008 was about 8.4 million cubic yards. This is the most recent capacity data available. The increase in the height of the landfill to an elevation 245 feet (NGVD29) would provide approximately 15.12 million cubic yards of additional capacity. In total, with the proposed redesign, approximately 24 million cubic yards of MSW could be landfilled at the NISL. Table 1.4-4 summarizes the capacity of the landfill. While the landfill would be constructed to a greater height than would occur under just the existing SWFP, the footprint of the landfill would not increase, and for much of the existing landfill surface, the height would not increase above what is currently allowed. (Some additional height will be added across the landfill surface with final closure because the final cover has not yet been put in place.) The footprint of the active landfill would actually decrease because the project proposes not to landfill the D-shaped area, which is currently allowed by the existing permits.

Examples of Proposed Activities: The proposed redesign would specify filling to an elevation of 245 feet (NGVD29). According to the applicant, regardless of the design, landfilling activities are anticipated to be completed around 2025. No change is proposed to the landfilling operation itself (*i.e.*, to the way in which waste is compacted and covered). No increase is proposed in the gate capacity (limit placed on the quantity of waste that can be brought to the landfill in a single day). The project does propose that no further landfilling would occur on the D-shaped area, which would allow that site to be developed and used permanently for any combination of the uses listed in Table 1.4-1. In addition, the project proposes to create a berm at the edge of the bench that would be located about halfway up the landfill at 110 to 130 feet to block views of the proposed activities at the midway bench (see Figure 1.0-10).

Table 1.4-4: Summary of Available Landfill Capacity under Permitted, Existing, and Proposed Conditions				
CIWMB Permitted Capacity	Existing, Remaining Capacity as of December 2008	Proposed Capacity	Total Proposed Capacity (permitted+proposed)	Total Remaining Capacity (existing+proposed)
(in million cubic yards)				
50.8	8.4	15.12	65.92	23.52

1.4.3.14 *Proposed Biological Measures*

The project as proposed includes the following to avoid biological impacts:

- Best Management Practices (*e.g.*, the use of construction fencing, silt fence, and other erosion and sediment controls around the borrow areas and the landfill) will be employed during construction to avoid the inadvertent placement or translocation of sediment into the wetlands surrounding the landfill area. These measures are currently employed as part of existing operations on the site.
- The existing Spill Prevention Control and Countermeasure Plan and Hazardous Materials Management Plan will continue to be implemented and will remain effective for the entire site, including the D-shaped area. These Plans are located in Appendix G of the JTD. The
- The wetland habitats outside of, and surrounding, the existing footprint of the landfill's impact areas (*i.e.*, the muted tidal salt marsh within wetland areas adjacent to the landfill and pickleweed/cattail wetland within the areas adjacent to Coyote Creek) will not be disturbed.
- The Construction & Demolition Recycling (C&D) area and any new activities that generate loud noises and vibration substantially greater than existing levels, as determined by a qualified acoustical consultant in consultation with a qualified biologist, will not be located within 700 feet of California clapper rail nesting habitat in Coyote Creek, South Coyote Slough, or associated tidal marsh habitats to the south, west, and north portions of the Newby Island site (see Figure 1.0-9).
- Ongoing landfill activities involve frequent use of heavy equipment, considerable noise, some ground vibrations, and movement of landfill personnel in proximity to the marsh and aquatic habitats surrounding the landfill. The intensity and locations of activities involving such disturbance change to some extent from year to year under existing conditions, and thus virtually the entire landfill is subject to at least some such disturbance under existing conditions. In light of the above stated assumption that the C&D area and any new activities that generate loud noises and vibration substantially greater than existing levels will not be located within 700 feet of California clapper rail nesting habitat, it is assumed that the use of heavy equipment, noise, ground vibrations, and movement of landfill personnel near the sensitive habitats surrounding the landfill will not increase substantially as a result of the project. It is also assumed that only permitted activities described in Table 1.4-1 will occur on NISL and new activities requiring additional permits will require additional environmental review.
- Composting operations will continue to use both compost retention ponds at their existing location. The main stormwater retention pond that is located along the southern boundary of the site will be replaced with two new retention ponds located on non-sensitive habitat to the east and west of its current location.

- No hazardous materials will be stored within 100 feet of any water body or wetland located outside the landfill's perimeter berm. Best Management Practices (BMPs) concerning the use, storage, and transport of any hazardous or toxic materials will be strictly followed during construction and landfill operation to prevent contamination of Coyote Creek, South Coyote Slough, and other off-site wetland habitats.
- Leachate, condensate, or other wastewaters piped to the WPCP will be transported through existing pipelines.
- No ordinance-sized trees will be removed or disturbed.
- The landfill operator continues to implement its vector controls.
- With approval of the project, the landfill will not be accepting more waste per year than it currently does, on average, but it will be able to accept the current levels of waste for a longer period than would be possible without the project.
- The landfill operator shall implement the NSAP (as revised) as summarized in mitigation measure MM BIO – 13.1 in Section 3.6.3 and included in full in Appendix D of the EIR.

1.4.4 End Use of the Site

The NISL (including the D-shaped area) is presently subject to an approved post-closure land use plan that consists primarily of passive open space, except for auxiliary uses like the GRS facility. The existing and proposed buildings would be removed after landfill closure. After landfilling has ceased, final cover will be installed, as will the appropriate monitoring systems. No change in the closure plan is proposed for the main body of the landfill other than the changes to elevation and slopes necessary to reflect the increased height. The existing and proposed buildings would be removed after landfill closure. From surrounding properties, the landfill at after closure will look like a large grass-covered hill. The proposed project would result in a taller grass-covered hill. Part of the NISL will be used for ongoing environmental control and monitoring facilities, consistent with the current final post-closure plan. The end use plan includes an education center, wildlife observation points, access roads and trails, and public facilities. The differences in the main body of the landfill at the end of use based on this proposal will be the height increase and associated grading changes.

The proposed project would preclude any further waste being placed on the D-shaped area, which is a change from the currently approved final post-closure plan. Instead of having approximately 70 more feet of fill placed on the D-shaped area, that part of the landfill site would be graded and paved and used for any or all of the uses listed in Table 1.4-1. Prior to implementation of the uses in Table 1.4-1 for the D-shaped area, the City will need to review and approve a Planned Development Permit that identifies the specific design, building configuration, uses, and operations for the property within the parameters of this approved PD zoning. This process is also required for continuing the unpermitted uses on the D-shaped area. The Recyclery is anticipated to continue operating after the landfill closes with any or all of the additional uses listed in Table 1.4-1.

1.5 CHANGES PROPOSED BY THE PROJECT

As discussed above, NISL (including the D-shaped area) is zoned R-M (Multiple Residence District). The Recyclery is currently zoned A(PD). This project proposes to rezone the entire site from R-M and A(PD) to A(PD) – *Planned Development*, with the new planned development zoning including the current landfill and related operations and practices; increasing the permitted top elevation of the landfill from 150 to 245 feet (NGVD29); adding to and modifying some of the uses allowed at the Recyclery (including allowing a future solid waste transfer facility); and changing the existing and previously approved uses of the D-shaped area to a specific group of uses related to the landfill and Recyclery operations, and a waste hauling business.

In addition to the increased height and capacity, the project includes some refinements to the existing site plan and changes in operations that the property owner believes may be necessary or desirable for the remaining life of the landfill. A conceptual site plan is provided in Figure 1.0-10.

Specific physical changes include the following:

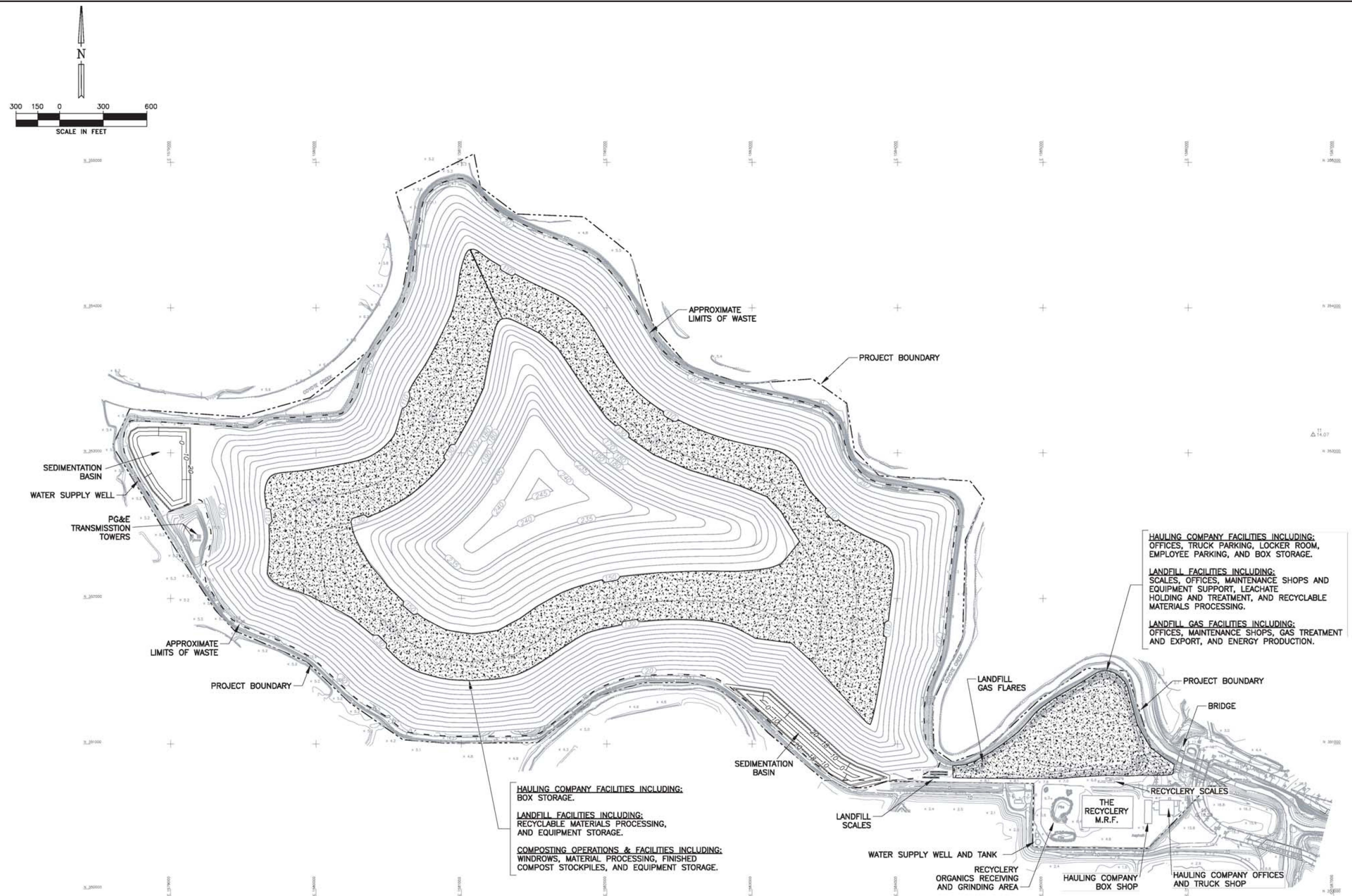
Landfill Site Plan/Operations

- The top elevation to which the landfill is allowed to be filled will be increased from 150 to 245 feet (NGVD29);
- The capacity of the landfill will be increased by approximately 15.12 million cubic yards beyond what is currently permitted in NISL's SWFP;
- The landfill vehicle maintenance shop may be relocated to either a different portion of the landfill area or the D-shaped area;
- The fueling station may be relocated to the D-shaped area;
- Two new stormwater detention ponds will be constructed on the landfill;
- The existing landfill scales will be relocated to the east, possibly onto the D-shaped area in order to allow sufficient queuing distance.
- Leachate management system (holding tanks and ancillary facilities) may be relocated to the D-shaped area;
- Construction and demolition materials recycling, ~~tire shredding~~, rock crushing, and concrete processing may be relocated to a different part of the landfill area and expanded to include recycling of carpet and/or other types of bulky materials;
- Transporting leachate to the WPCP may be done by an existing pipe, instead of truck.
- Creating a berm at the edge of the proposed midway bench located about halfway up the landfill at 110 to 130 feet to block views of the proposed activities at the bench (refer to Figure 1.0-10).



FIGURE 1.0-9

MAP OF POTENTIAL CLAPPER RAIL HABITAT



Source: BAS, 9/21/2008

CONCEPTUAL SITE PLAN

FIGURE 1.0-10

D-Shaped Area

In addition to some of the temporary and long term uses associated with maintenance and oversight of the landfill before and after closure (such as vehicle maintenance, scales, etc.), it is proposed that some or all of the uses listed in Table 1.4-1 be allowed on the D-Shaped Area. These uses could include a corporation yard for the hauling company consisting of some combination of the offices, vehicle parking and maintenance, and equipment storage and maintenance. While some of the hauling company operations are already located on this site or in the area, they are not allowed by the existing zoning nor are they consistent with any of the current permits.

Proposed new uses not presently located on the site or in the area include a public education facility (which could be an outdoor kiosk or room in a building), HHW turn-in and storage facility, public drop-off location for waste and/or recycling, and a paint booth for bins and equipment used for the hauling company operation. Details regarding these uses, including building size, specific location, and operations, are unknown at this time, but will occur within the development regulation parameters that are the subject of this EIR (see Figure 1.0-7). The approval of the proposed rezoning would allow for these uses on-site; however, PD Permits will be required for these uses when sufficient details regarding the design and scope of the uses are known and before construction and operation of the uses on-site would occur. Subsequent environmental review may also be required at the PD Permit stage to confirm that these uses would not result in new or substantially more severe impacts than those identified in this EIR.

Composting

- The compost windrows may be moved to one or more different locations on the landfill other than the D-shaped area. In addition, the organics receiving and processing operations (including processing of food wastes) may be co-located with the composting area.
- ~~In vessel composting may be re-introduced.~~
- As part of the project, composting may take place west of the “Initial Compost Area Line.” The Initial Compost Area Line delineates the easternmost boundary of the landfill currently used or foreseeably used for composting at the time of this proposed rezoning. If composting is proposed east of the Initial Compost Area Line, a PD Permit/Amendment shall be required with additional environmental review before composting can be moved east of the Initial Compost Area Line. The potential odor impacts of any such proposed relocation shall be assessed using then-current industry standards and the landfill operator shall be required to mitigate odor impacts anticipated, from the relocation of composting operations in accordance with CEQA, utilizing the best, commercially reasonable, industry management practices.

The Recyclery

Many of the hauling company operations are already located on the site, but are not allowed by existing permits. The following would be allowed by the proposed zoning:

- Vehicle maintenance of hauling company vehicles could be located on the Recyclery site and/or the D-shaped area;
- Hauling company employee locker room, shop, and offices may be located on the Recyclery property and/or D-shaped area;
- Processing food waste for composting would be allowed on the Recyclery property;

The following uses are not currently located on the Recyclery, and would also be allowed by the proposed zoning:

- HHW drop-off and storage facility would be allowed on the property;
- Public drop-off location for waste and/or recycling would be allowed on the property;
- Solid waste transfer facility on the property; and
- Paint booth for bins and equipment used on this site would be allowed on the property.

Other Operations

- The GRS plant (see Landfill Gas to Energy Plants and Landfill Gas Export Plant on Figure 1.0-6) may be expanded and relocated to the east, probably to the D-shaped area;
- Biosolids may be used as a constituent of interim or final cover, to facilitate vegetation on the landfill;²⁶
- The landfill may import additional soil, if necessary for operations or closure;
- The landfill may import bentonite, or similar soil, for liner construction, or closure;
- Any of the facilities may utilize landfill gas for on-site energy needs;
- Any of the facilities or operations may implement operational or physical changes necessary to reduce greenhouse gas emissions as long as these changes have no greater or substantially different environmental impacts than the project elements addressed above and subject to approval by the Director of Planning, Building, and Code Enforcement;
- Any of the facilities or operations may implement operational or physical changes necessary to comply with existing and new regulations as long as these changes have no greater or substantially different environmental impacts than the project elements addressed above and subject to approval by the Director of Planning, Building, and Code Enforcement; ~~and~~
- The landfill may use an existing pipeline to pipe leachate, condensate, or other wastewaters generated on-site directly to the WPCP.
- Any of the facilities or operations may use other emerging technologies having no greater or substantially different environmental impacts than the project elements addressed above and subject to approval by the Director of Planning, Building, and Code Enforcement.

Traffic

As reflected in the vehicle counts made in the recent past, the current quantity of traffic is highly variable. While the landfill is permitted to accept an average of 3,260 tpd for disposal and a daily maximum of 4,000 tpd for disposal, it has not received such quantities in recent years. Daily traffic varies a great deal, both on a daily basis and seasonally. Much of the traffic to the larger site is associated with activities other than landfilled waste, including delivery of soil and construction/demolition debris, delivery of source separated recycled materials, off-hauling compost and other recycled materials, hauling company operations, employee vehicles, vendors and visitors. (Not all of this traffic is associated with uses that are presently permitted on the site.)

Although the site is permitted to accept waste quantities that would generate substantially greater traffic than current conditions, the project is proposing to limit the total traffic volumes hauling waste and recyclables to those experienced in October 2006. The Solid Waste Facility Permits would state

²⁶ Because no specific information is available as to the method that would be used to incorporate biosolids into final cover, subsequent environmental review will be required to address the potential for odors, insects, and other vectors to become problems.

this traffic limit. This limitation does not include traffic generated by employees, visitors, regulatory personnel, construction, or other vehicles not hauling waste and recyclables to the site.

1.6 USES OF THE EIR

This EIR will provide decision-makers in the City of San José, other responsible and trustee agencies, and the general public with relevant environmental information to use in considering the proposed project. It is intended that this EIR be used for appropriate project-specific discretionary approvals necessary to implement the project, as proposed. These discretionary actions include, but may not be limited to, the following approvals:

City of San José

- Planned Development Rezoning (PDC07-071)
- Amendments to the Solid Waste Facility Permits
- Modification to the Landfill Preliminary Closure and Post-Closure Maintenance Plan
- PD Permits
- Storm Water Pollution Prevention Plan

California Integrated Waste Management Board

- Amendments to the Solid Waste Facility Permits
- Modification to the Landfill Preliminary Closure and Post-Closure Maintenance Plan

City of Milpitas

- ~~Utility connection agreements~~

Bay Area Air Quality Management District

- Authority to Construct (which will require the purchase of Emission Reduction Credits by the landfill – see **Section 3.4 Air Quality**)

San Francisco Bay Regional Water Quality Control Board

- Revise NPDES general permit

This EIR provides environmental clearance for operation of a solid waste transfer facility²⁷ on the Recyclery property. A PD Permit will be required for the operation of that facility. Subsequent environmental review will be conducted as part of that PD Permit to analyze and disclose the impacts associated with the receiving facility.

²⁷ A solid waste transfer facility is a facility that receives primarily solid waste materials, from commercial vehicles for the purpose of storing and handling prior to transferring to another facility. Such a facility may have limited recapture of recyclable materials as defined in the City's Zoning Ordinance. (City of San José. Zoning Ordinance. 20.200.1280.)

There are a number uses proposed as part of this rezoning that would require subsequent environmental review because specific details about the construction and/or operation of those uses (e.g., details regarding the receiving facility for the proposed solid waste transfer facility) are unknown at this time. The process followed could include preparation of an Addendum to this EIR, preparation of a Negative Declaration that tiers from this EIR or preparation of a supplemental or subsequent EIR. These uses/actions that would require subsequent environmental review include the following:

- Construction of buildings/structures;
- Expansion of the GRS facility;
- Operation of a household hazardous waste turn-in and storage facility;
- Operation of a public drop-off for waste and/or recycling on the site;
- Operation of a public education facility (which could be an outdoor kiosk or room in a building);
- On-site operation of a solid waste transfer facility on the Recyclery;
- Recycling of new materials and use of new recycling technologies not currently used at the site;
- Recycling/processing of new materials not currently processed at the site and use of new processing equipment not currently used at the site;
- Reduction in existing operating hours (which are currently 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday);
- Use of biosolids as a constituent of interim or final cover; and
- Relocation of compost windrows east of the Initial Compost Area Line.

Uses not proposed as part of the project would require rezoning of the site and subsequent environmental review. Uses that are not proposed as part of the project include, but are not limited to, the following:

- Placement of recycling activities on the site that are visible off-site;
- Receiving or processing MSW at the Recyclery; and
- Expansion of the composting facility.

SECTION 2.0

CONSISTENCY WITH RELEVANT PLANS AND POLICIES

In conformance with Section 15125(d) of the CEQA guidelines, this section of the EIR discusses how the project complies with existing, relevant, regional plans and policies and the City's General Plan and applicable plans and policies.

2.1 REGIONAL PLANS

2.1.1 Bay Area 2005 Ozone Strategy

The Bay Area Air Quality Management District (BAAQMD), in cooperation with the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), prepared the Bay Area 2005 Ozone Strategy which serves as a roadmap showing how the San Francisco Bay Area will achieve compliance with the state one-hour air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The Bay Area 2005 Ozone Strategy updates Vehicle Miles Traveled (VMT) and other assumptions in the 2000 Clean Air Plan (CAP) related to the reduction of ozone in the atmosphere and serves as the current CAP for the Bay Area. The consistency of the proposed project with this regional plan is primarily a question of the consistency with the population/employment assumptions utilized in developing the *Ozone Strategy*, which were based on Association of Bay Area Governments (ABAG) Projections 2002.

Consistency: The proposed project would not result in an increase in housing within the region or a substantial increase in jobs not foreseen in the current General Plan and CAP. For this reason, the project is consistent with the CAP and Bay Area 2005 Ozone Strategy.

2.1.2 State Water Quality Control Board National Pollution Discharge Elimination System Permit

The Federal Clean Water Act requires local municipalities to implement measures to control construction and post-construction pollution entering local storm drainage systems to the maximum extent practicable. To comply with the requirements of the Federal Clean Water Act, the State Water Resources Control Board (SWRCB) implemented a National Pollution Discharge Elimination System (NPDES) permit for the Santa Clara Valley. Subsequent to implementation of the permit, the San Francisco Regional Water Quality Control Board (RWQCB) issued a Municipal Storm Water NPDES Permit to 15 co-permittees, including the City of San José. Two programs, the Nonpoint Source Pollution Program and the Santa Clara Valley Urban Runoff Pollution Prevention Program, have been implemented under the NPDES permit to regulate construction and post-construction runoff.

Consistency: The landfill has its own NPDES permit, which it will continue to implement under the proposed project.

2.1.3 San Francisco Bay Trail

In 1987, Senate Bill 100 was passed into law directing the ABAG to create a trail/recreational corridor that was to be aligned along the Bay. The Bay Trail, when complete, will encircle San Francisco and San Pablo Bays with a continuous 500-mile network of bicycling and hiking trails. The San Francisco Bay Trail will connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major toll bridges in the region. To date, approximately 290 miles of the alignment—over half the Bay Trail’s planned length—have been completed.

The San Francisco Bay Trail Master Plan, adopted by ABAG in July 1989, includes a proposed alignment; a set of policies to guide the future selection, design and implementation of routes; and strategies for implementation and financing.

Figure 3.0-1 shows the existing and planned San Francisco Bay Trail in the project site vicinity. The current plans for the San Francisco Bay Trail show the trail being extended from its current terminus near the intersection of Fremont Boulevard and Lakeview Boulevard in Fremont, around the landfill on top of levees, to connect to the stretch that runs along McCarthy Boulevard to the south, in Milpitas.

Consistency: As discussed in **Section 3.1 Land Use**, the landfill height increase will not preclude locating the San Francisco Bay Trail on its adjacent levees. In addition, the project does not propose to expand the footprint of the landfill or otherwise interfere with the future San Francisco Bay Trail alignment. For these reasons, the project is consistent with the San Francisco Bay Trail.

2.1.4 San José Bay Trail Master Plan

The San José’s Bay Trail Master Plan was adopted by the City Council in 2001. The San José Bay Trail Master Plan provides for a trail plan for the San José segment of the San Francisco Bay Trail project (see discussion above) that will ultimately lead to a continuous trail around the San Francisco Bay. Once built, the San José portion of the trail will be approximately 13 miles in length and follow the shore and some roadways in Alviso. The nearest San José Bay Trail reach to the project site is located south of Dixon Landing Road and McCarthy Boulevard intersection on the west side of Coyote Creek (refer to Figure 3.0-1).

Consistency: The nearest planned segment of the San José Bay Trail is located south of the project site. The project would not expand the footprint of the landfill or otherwise interfere with the San José Bay Trail segments. Therefore, the proposed project would not interfere with the San José Bay Trail Master Plan.

2.1.5 Santa Clara County Congestion Management Program

The Santa Clara County Valley Transportation Authority (VTA) oversees the Santa Clara County Congestion Management Program (CMP). The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county’s share of the increased gas tax revenues. The CMP legislation requires that each CMP contain five mandatory elements: 1) a system definition and traffic level of service standard element; 2) a transit service and standards element; 3) a trip reduction and transportation demand management element; 4) a land use impact analysis element; and 5) a capital improvement element. The Santa Clara County CMP includes the five mandated elements and three additional elements, including a county-wide transportation model

and database element, and annual monitoring and conformance element, and a deficiency plan element.

Consistency: As discussed in **Section 3.3 Transportation**, the project would not generate additional trips above the existing number of trips associated with landfill operations. For this reason, the project would not result in new traffic impacts, including new impacts to CMP intersections.

2.2 LOCAL PLANS AND POLICIES

2.2.1 City of San José Post-Construction Urban Runoff Management Policy 6-29

The City of San José's adopted Council Policy No. 6-29 implements Provision C.3 of the NPDES Permit by requiring all new and redevelopment projects to implement Post-Construction Best Management Practices (BMPs)²⁸ and Treatment Control Measures (TCMs)²⁹ to the maximum extent practicable. The threshold for requiring numerically sized Post-Construction TCMs is any project that creates, adds, or replaces 10,000 square feet or more of impervious surface. This policy does not apply to projects that do not connect to the City's storm drain system.

Consistency: As discussed in **Section 3.8 Hydrology and Water Quality**, the site is not connected to the City's storm drain system and runoff from the site is not conveyed to the City's storm drain system. Therefore, this policy does not apply to the project. Runoff from the Recyclery is conveyed to the main stormwater retention pond on the landfill. The landfill is required to comply with its NPDES General Permit and implement its Storm Water Pollution Prevention Plan (SWPPP) to reduce runoff impacts.

2.2.2 City of San José Post-Construction Hydromodification Management Policy 8-14

In 2005, the City of San José adopted the Post-Construction Hydromodification Management (Policy 8-14) to manage development related increases in peak runoff flow, volume and duration, where such hydromodification³⁰ is likely to cause increased erosion, silt pollution generation, or other impacts to local rivers, streams, and creeks.

²⁸ Post-Construction Best Management Practices (BMPs) are methods, activities, maintenance procedures, or other management practices designed to reduce the amount of stormwater pollutant loading from a site. Examples of Post-Construction BMPs include proper materials storage and housekeeping activities, public and employee education programs, and storm inlet maintenance and stenciling.

²⁹ Post-Construction Treatment Control Measures are: site design measures, landscape characteristics or permanent stormwater pollution prevention devices installed and maintained as part of a new development or redevelopment project to reduce stormwater pollution loading from the site; are installed as part of a new development or redevelopment project; and are maintained in place after construction has been completed. Examples of runoff treatment control measures include filtration and infiltration devices (e.g., vegetative swales/biofilters, insert filters, and oil/water separators) or detention/retention measures (e.g., detention/retention ponds). Post-Construction TCMs are a category of BMPs.

³⁰ Hydromodification occurs when the total area of impervious surfaces increases resulting in the decrease of rainfall infiltration, which causes more water to run off the surface as overland flow at a faster rate. Storms that previously did not produce runoff from a property under previous conditions can produce erosive flows in creeks. The increase in the volume of runoff and the length of time that erosive flows occur intensifies sediment transport, increasing creek scouring and erosion as well as causing changes in stream shape and conditions, which can, in turn, impair the beneficial uses of the stream channels.

Policy 8-14 requires stormwater discharges from new and redevelopment projects that create or replace one acre (43,560 square feet) or more of impervious surfaces to be designed and built to control project-related hydromodification, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. The Policy establishes specified performance criteria for Post-Construction Hydromodification Control Measures (HCMs) and identifies projects which are exempt from HCM requirements. For example, projects are exempt that do not increase the impervious area of a site, as are projects that drain to exempt channels, projects that drain to stream channels within the tidally influenced area, or projects that drain to non earthen stream channels that are hardened on three sides and extend continuously upstream from the tidally influenced area. This policy does not apply to projects that do not connect to the City's storm drain system.

Consistency: As discussed in **Section 3.8 Hydrology and Water Quality**, the site is not connected to the City's storm drain system and runoff from the site is not conveyed to the City's storm drain system. Therefore, this policy does not apply to the project. Runoff from the Recyclery is conveyed to the main stormwater retention pond on the landfill. The landfill is required to comply with its NPDES General Permit and implement its SWPPP to reduce runoff impacts.

2.2.3 General Plan

The *San José 2020 General Plan* is the document that contains the City's official policies regarding the future character and quality of development in San José. The General Plan includes major strategies, along with numerous goals and policies that are designed to achieve the goals that are embodied in the major strategies.

The following text describes those General Plan strategies and policies that are applicable to this project, as well as any inconsistencies between the two. A summary of the text discussion is provided in Table 7.2-1.

2.2.3.1 *Land Use/Transportation Diagram*

The Land Use/Transportation Diagram is essentially a large map that depicts all of the planned land use throughout San José, plus the primary transportation network that is proposed to support the land uses. The land uses that are shown on the diagram are the product of comprehensive land use planning, with a goal of promoting efficient and compatible land use.

The Recyclery and the D-shaped area are both within the City's Urban Growth Boundary (UGB) and Urban Service Area (USA). The landfill (NISL) is outside of both the UGB and the USA. As discussed in **Section 3.1 Land Use**, most of the NISL is designated as *Private Open Space* with a *Solid Waste Disposal Facility* overlay within the Alviso Planned Community in the City's General Plan. The D-shaped area is currently designated as *Light Industrial* in the General Plan and the Recyclery is designated as *Public/Quasi-Public* in the General Plan and both sites are also within the Alviso Planned Community.

Consistency: As discussed in **Section 3.1 Land Use**, the project is consistent with the existing General Plan land use designations and the General Plan Land Use/Transportation Diagram.

2.2.3.2 Major Strategies

Economic Development Strategy

The City of San José's Economic Development Strategy strives to make San José a more "balanced community" by encouraging more commercial and industrial development to balance the existing residential development. San José currently has a surplus of housing in relation to employment opportunities, which is referred to as a jobs/housing imbalance. This imbalance makes it difficult to provide adequate urban services because residential development does not generate sufficient revenue to cover service demands. As a result, economic development is a priority for the City.

Consistency: The proposed project would increase the total amount of waste that can be buried at the existing landfill and extend the useful life of the landfill. The project does not propose any housing development nor would it induce population growth. For these reasons, the project is consistent with the City's Economic Development Strategy.

Sustainable City Strategy

The Sustainable City Major Strategy is a statement of San José's commitment to becoming an environmentally and economically sustainable city. Programs promoted under this strategy include recycling, waste disposal, water conservation, transportation demand management, and energy efficiency. The Sustainable City Strategy is intended to support these efforts by encouraging development that is designed and built in a manner consistent with the efficient use of resources and environmental protection.

Consistency: The project proposes the expansion of an existing waste processing facility as well as incremental changes to existing operations, which include utilizing landfill gas for on-site energy needs and allowing expansion of on-site recycling, including public drop-off and household hazardous waste storage. As discussed in **Section 6.5**, the project would not have a significant impact on global climate change. For this reason, the project is consistent with the Sustainable City Strategy.

2.2.3.3 Goals and Policies

Community Development

Industrial Land Use

Policy 1: Industrial development should incorporate measures to minimize negative impacts on nearby land uses.

Consistency: As discussed in **Section 3.1 Land Use**, the project site is surrounded by a wildlife refuge, wetlands, the WPCP, and commercial/light industrial uses. Due to the location of the landfill, there are few (if any) sources of incompatibility between the landfill and surrounding land uses. The project, consistent with the project assumptions outlined in **Section 3.6 Biological Resources** and with the implementation of the mitigation measures identified in **Section 3.6**, would not result in significant impacts to biotic habitats or special-status species. For these reasons, the project is consistent with this policy.

Service and Facilities

Levels of Service, Other Services

Policy 20: For solid waste management, the City should seek to exceed 50 percent diversion of waste from disposal, maintain 20 years of landfill capacity, and provide for storage and collection of recyclables from every location where solid waste is generated.

Consistency: The project will not decrease landfill capacity or recycling capacity, but normalizing on-site recycling operations, allows for addition of similar activities.

Solid Waste

Policy 4: The preferred method for increasing the City's landfill capacity is to expand the capacity of existing landfill sites and monitor the continued availability of recycling, resource recovery and composting capacity to ensure adequate long term capacity.

Consistency: The project proposes to increase the height, which would result in an increase in capacity, of an existing landfill. The project is consistent with this policy.

Policy 19: Only compatible uses should be located adjacent to an operating landfill or other regional publicly owned facility, such as the Water Pollution Control Plant.

Consistency: The project would place the waste and recycling hauling company corporation yard facilities, a household hazardous waste turn-in and storage facility, and a bulky discards and recycling drop-off facility immediately adjacent to a regional landfill and the WPCP. The nature of the uses would be generally compatible with the landfill. The mitigations included in the project will minimize future conflicts with the WPCP. The project is consistent with this policy.

Natural Resources

Bay and Baylands

Policy 6: No development which creates adverse impacts on the National Wildlife Refuge in South San Francisco Bay or results in a net loss of bay lands habitat value should be permitted.

Consistency: Currently, the gulls at the landfill prey on rare species in the project vicinity. With the implementation of the mitigation measures identified in **Section 3.6 Biological Resources**, the proposed project would not result in new or more significant impacts to biological resources including biotic habitats and special-status species. Compared to existing conditions, the proposed project with the implementation of the mitigation measures identified in **Section 3.6 Biological Resources** would result in no net loss of habitat value or significant impact to the Refuge~~would occur~~, therefore the project is consistent with this policy.

Energy

Policy 5: The City should encourage owners and residents of existing developments to implement programs to use energy more efficiently in buildings and in their transportation choices, to reduce dependency on automobiles, and to explore alternative energy sources.

Consistency: NISL includes an electricity generating facility (GRS facility). The facility collects landfill gas, a renewable energy resource, and processes it to generate electricity. The electricity generated is used for on-site operations or for export. The project is consistent with this policy by using an alternative energy source.

Hazards

Soils and Geologic Conditions

Policy 1: The City should require soils and geologic review of development proposals to assess such hazards as potential seismic hazards, surface ruptures, liquefaction, landholdings, mudslides, erosion, and sedimentation in order to determine if these hazards can be adequately mitigated.

Consistency: A geotechnical evaluation was prepared to assess the potential for the proposed vertical height expansion of the landfill. The report evaluated impacts related to seismic hazards, liquefaction and slope stability, final cover stability, and consolidation settlement of the landfill foundation associated with the proposed project. A copy of the geotechnical report is included in Appendix E. A discussion of the findings of this report is included in **Section 3.7 Geology and Soils**. As discussed in **Section 3.7**, the project would not result in significant geology and soil impacts. The project is consistent with this policy.

Policy 6: Development in areas subject to soils and geologic hazards should incorporate adequate mitigation measures.

Consistency: The proposed project, as discussed in **Section 3.7 Geology and Soils**, would not result in significant geology and soil impacts. The project is consistent with this policy.

Earthquakes

Policy 3: The City should only approve new development in areas of identified seismic hazard if such hazard can be appropriately mitigated.

Consistency: A seismic hazard assessment was completed as part of the geotechnical evaluation for the project and a peer review was done by leading experts in the field. The assessment determined that the project would not result in significant impacts related to seismic or seismic-related hazards, therefore, the project is consistent with this policy (refer to **Section 3.7 Geology and Soils** and Appendix E).

Policy 5: The City should continue to require geotechnical studies for development proposals; such studies should determine the actual extent of seismic hazards, optimum location for structures, the advisability of special structural requirements, and the feasibility and desirability of a proposed facility in a specified location.

Consistency: The project is the vertical expansion of an existing landfill. A geotechnical evaluation was prepared to assess impacts related to the proposed project. As discussed in **Section 3.7 Geology and Soils**, the project would not result in significant geology impacts. The project is consistent with this policy.

Flooding

Policy 1: New development should be designed to provide protection from potential impacts of flooding during the one percent or 100-year flood.

Consistency: There is an existing levee that protects NISL and the Recyclery from a 100-year flood (refer to **Section 3.8 Hydrology and Water Quality** for more detail). The project is consistent with this policy.

Hazardous Materials

Policy 1: The City should require proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

Consistency: In the event that hazardous materials are discovered in incoming MSW loads, they are stored in a special container near the C&D recycling area on the landfill and procedures for proper disposal are followed as outlined in the Hazardous Waste Load Checking Program. Hazardous materials are also used on-site for equipment maintenance. These materials are stored in tanker trucks and in double contained tanks (to prevent leakage) in the landfill maintenance shop, in accordance with the site's Hazardous Materials Management Plan (HMMP). The use and storage of hazardous materials for equipment maintenance would continue under the proposed project.

The project is proposing to accept household hazardous wastes on the landfill site, the D-shaped area, and at the Recyclery. No specific design is proposed at this time, but the facilities will be subject to issuance of a PD Permit in the future and subsequent environmental review. It is assumed that such facilities would reflect all then-current regulatory requirements, including double containment, separation of incompatible substances, and management by trained personnel.

The proposed project would be consistent with this policy.

2.2.3.4 Alviso Master Plan

The Alviso Master Plan is an adopted statement of long-term goals, policies, and implementation measures for guiding the future development of the community of Alviso. The following text describes the Master Plan policies that are applicable to this project, as well as any inconsistency between the two.

Land Use

Industrial/Non-Industrial Relationships

Policy 1: Industrial uses are not allowed to store, handle, dispose, and/or use acutely hazardous materials within one-quarter mile of residential uses, George Mayne School, New Chicago Marsh (*i.e.*, National Wildlife Refuge), and other sensitive uses and habitats.

Consistency: The project site is located adjacent to the Wildlife Refuge. In the event that hazardous materials are discovered in incoming MSW loads, they are stored in a special container near the C&D recycling area on the landfill and procedures for proper disposal are followed as outlined in the Hazardous Waste Load Checking Program. Hazardous materials are also used on-site for equipment

maintenance. These materials are stored in tanker trucks and in double contained tanks (to prevent leakage) in the landfill maintenance shop, in accordance with the site's Hazardous Materials Management Plan (HMMP). The use and storage of hazardous materials for equipment maintenance would continue under the proposed project.

The project is proposing to accept household hazardous wastes on the landfill site, the D-shaped area, and at the Recyclery. No specific design is proposed at this time, but will be subject to issuance of a PD Permit and subsequent environmental review in the future when such design and operation details are known. It is assumed that such facilities would reflect all then current regulatory requirements, including double containment and management by trained personnel.

While the project is not wholly consistent with this policy because it stores, handles, dispose, and/or uses hazardous materials in proximity to a sensitive use (*i.e.*, the Refuge), the hazardous materials are handled consistent with the site's HMMP and current regulatory requirements (*e.g.*, the use of double containment and management by trained personnel) which aim to prevent and minimize impacts; therefore, the project is consistent with the intent of the policy.

Policy 2: The Light Industrial areas located north of State Street and adjacent to Coyote Creek should mitigate potential negative environmental impacts to nearby natural resources.

Consistency: The D-shaped area of the project site is designated for light industrial uses and is located adjacent to Coyote Creek. Currently, the NISL permits show the D-shaped area being used for waste disposal in the future. As part of the project, future uses of the D-shaped area would include support uses for the waste disposal and recycling activities continuing to occur at the Recyclery and on the remainder of the NISL site. After the landfill closes, the D-shaped area could be used for a number of uses as listed on the proposed PD Rezoning General Development Plan, including use as a corporation yard. Consistent with the assumptions and mitigation measures identified in **Section 3.6 Biological Resources**, the uses on the D-shaped area would not result in significant impacts to biological resources, including sensitive habitats and special-status species. The project is consistent with this policy.

Environmental Protection

Policy 3: The riparian corridors adjacent to Coyote Creek and Guadalupe River should be preserved intact. Any development adjacent to the waterways should follow the City's Riparian Corridor Policy.

Consistency: The project site is adjacent to Coyote Creek. Tidal brackish marsh habitat is located on all areas of the project site adjacent to Coyote Creek. As discussed in **Section 3.6 Biological Resources**, the project would not result in changes that would significantly impact the creek or tidal brackish marsh habitat. The project would be consistent with the City's Riparian Corridor Policy as applicable.

Table 2.2-1: Summary of the Project's Consistency with Applicable General Plan Strategies and Policies		
	Consistent?	
	Yes	No
<i>Land Use/Transportation Diagram</i>	X	
<i>Major Strategies</i>		
Economic Development	X	
Sustainable City	X	
<i>Goals and Policies</i>		
Industrial Land Use Policy 1	X	
Levels of Service, Other Services Policy 20	X	
Solid Waste Policy 4	X	
Bay and Baylands Policy 6	X	
Energy Policy 5	X	
Soils and Geologic Conditions Policy 1	X	
Soils and Geologic Conditions Policy 6	X	
Earthquakes Policy 3	X	
Earthquakes Policy 5	X	
Flooding Policy 1	X	
Hazardous Materials Policy 1	X	
<i>Alviso Master Plan</i>		
Industrial/Non-Industrial Relationships Policy 1	X	
Industrial/Non-Industrial Relationships Policy 2	X	
Environmental Protection Policy 3	X	

2.2.4 *Envision San José 2040 General Plan*

Since the Draft EIR was circulated, the City of San José prepared and adopted a new General Plan, *Envision San José 2040*. The new Land Use/Transportation Diagram designates the landfill site as *Open Space, Parklands, and Habitat* with a “Solid Waste Disposal Site” designation as a currently operating disposal facility. The landfill is outside the UGB. The Recyclery and D-shaped area are both designated *Light Industrial* and are inside the UGB. All three areas are also within the Alviso Specific Plan boundary.

The new General Plan includes the following policies related to solid waste, materials recovery, and landfill infrastructure:

IN-5.1 Monitor the continued availability of long-term collection, transfer, recycling and disposal capacity to ensure adequate solid waste capacity. Periodically assess infrastructure needs to support the City's waste diversion goals. Work with private MRF and Landfill operators to provide facility capacity to implement new City programs to expand recycling, composting and other waste processing.

IN-5.3 Use solid waste reduction techniques, including source reduction, reuse, recycling, source separation, composting, energy recovery and transformation of solid wastes to extend the life span of existing landfills and to reduce the need for future landfill facilities and to achieve the City's Zero Waste goals.

IN-5.4 Support the expansion of infrastructure to provide increased capacity for Materials Recovery Facilities (MRF)/transfer, composting, and Construction and Demolition materials processing (C&D) at privately operated facilities and on lands under City control to provide increased long-term flexibility and certainty.

IN-5.6 Promote secondary uses at MRF and landfill sites, including economically beneficial recovery of solid waste resources, waste-to-energy conversion, organic materials processing, and development of resource recovery parks.

IN-5.9 Locate and operate solid waste disposal facilities in a manner which protects environmental resources and is compatible with existing and planned surrounding land uses.

IN-5.10 Plan, maintain and operate MRF and landfill facilities in a manner that mitigates potential negative environmental and land use impacts, including surface water or ground water contamination; issues related to birds, insects, rodents or other wildlife; increased traffic and traffic hazards; noise and odor problems; pollution and potential littering of traffic routes; and windborne and waterborne litter.

IN-5.15 The preferred method for increasing the City's landfill capacity is to expand the capacity of existing landfill sites and monitor the continued availability of recycling, resource recovery and composting capacity to ensure adequate long term capacity.

IN-5.16 Plan for the eventual phased restoration to recreational or open space uses, including revegetation with native plant species, the portions of landfill facilities located outside of the Urban Growth Boundary, where waste processing and composting operations are not maintained.

IN-5.17 Use landscape and design measures to screen solid waste landfill sites from public view when they are not already screened by topography and naturally occurring vegetation, and when such measures are practicable considering all other environmental goals of the City.

Conclusion: The proposed expansion of the landfill height and modifications to the existing resource recovery operations are consistent with the land use designation and with these policies as they are presently proposed in the Planned Development Rezoning.

2.2.5 San José Green Vision

In October 2007, the City Council adopted the *San José Green Vision*. The *Green Vision* is a 15-year plan to transform San José into a world center of Clean Technology, promote cutting-edge sustainable practices, and demonstrate that the goals of economic growth, environmental stewardship and fiscal responsibility are inextricably linked. The 10 goals of the *Green Vision* are as follows:

1. Create 25,000 Clean Tech jobs as the World Center of Clean Tech Innovation;
2. Reduce per capita energy use by 50 percent;
3. Receive 100 percent of our electrical power from clean renewable sources;
4. Build or retrofit 50 million square feet of green buildings;
5. Divert 100 percent of the waste from our landfill and convert waste to energy;
6. Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day);

7. Adopt a General Plan with measurable standards for sustainable development;
8. Ensure that 100 percent of public fleet vehicles run on alternative fuels;
9. Plant 100,000 new trees and replace 100 percent of our streetlights with smart, zero-emission lighting; and
10. Create 100 miles of interconnected trails.

The City envisions achieving these goals by the year 2022.

Consistency: The Green Vision goals that are applicable to the project are goal numbers 3 and 5. As discussed in Section 3.12 Energy of the Draft EIR, landfill gas generated on-site is used to generate electricity, exported to the San José/Santa Clara Water Pollution Control Plan (WPCP), or combusted by the existing landfill flares. Landfill gas generated is a renewable resource for electricity generation. Therefore, the landfill's processing of landfill gas is consistent with Green Vision Goal 3.

Green Vision Goal 5 of diverting 100 percent of waste from landfills does not mean that no waste will be landfilled. As the City moves towards zero waste, recycling and composting efforts will increase. However, not all waste generated can feasibly be recycled/reused or composted with current technology. Residuals from the recycling and composting operations will still need to be landfilled for the foreseeable future. The proposed project creates additional landfill capacity, but also provides for the continued operation of multiple composting and recycling operations. The proposed project is not in conflict with Green Vision Goal 5.

Green Vision Goal 10 is to create 100 miles of interconnected trails. As discussed in Section 4.2, the San Francisco Bay Trail project includes a planned trail loop along the perimeter levee of the landfill. In addition, there are other existing and planned trails and paths in the project vicinity. As discussed in Sections 3.1 Land Use and 3.3 Transportation, the proposed project would not conflict with the alignments of existing or planned trails and paths. Based on the above discussion, the project is consistent with the Green Vision.

2.2.6 Zero Waste Strategic Plan

In October 2007, the City approved a Zero Waste Resolution which had the objectives of 75 percent waste diversion by 2013 and zero waste by 2022. Zero waste entails shifting consumption patterns, more carefully managing purchases, and maximizing the reuse of materials at the end of their useful life. Zero waste takes into account the whole materials management system, from product design and extraction of natural resources, to manufacturing and distribution, to produce use and reuse, to recycling or disposal.

The City's Zero Waste Strategic Plan provides an overview of key zero waste initiatives and describes policies, programs, and facilities that the City will need within the next 11 years to realize the City's vision of achieving zero waste. Most initiatives identified in the Zero Waste Strategic Plan are policy decisions and focus on the waste generator (e.g., residences, commercial businesses, and schools). Specific to landfills, the Zero Waste Strategic Plan discusses possible landfill regulations and material bans, reduction in alternative daily cover use, and measures to reduce greenhouse gas emissions including improved landfill methane control and capture and high recycling/zero waste activities. Additional information about the City's Zero Waste Strategic Plan is available at: <http://www.sjrecycles.org/zerowaste-stratplan.asp>.

Consistency: While the City of San José has the goal of achieving zero waste by 2022, the Zero Waste Strategic Plan does not identify specifically how such a goal would be achieved. In addition, the City has an existing contract with the landfill through December 31, 2020, for up to 380,000 tons of waste. The contract provides that the City may extend the term to continue for the period of time the landfill accepts solid waste from any source [Source: *Disposal Agreement (Second Amendment, October 21, 2009), Section 3.2 and Section 4.1.* <http://www.sjrecycles.org/PDFs/SecondAmendmentDisposalAgreement2009.pdf>.]

The landfill is under contract with San José and other municipalities to receive approximately 6.2 million tons of waste through 2023 (refer to Table 3.0-1). The proposed maximum landfill height increase to 245 feet would allow the landfill to continue receiving waste, including contractual waste, at the existing rate (see page 4 of the Draft EIR).

While it is likely that current and planned zero waste programs will reduce the amount of waste actually delivered to the landfill, the landfill is required under contract to have sufficient capacity to receive committed quantities of waste from specific municipalities. The project is not in conflict with the City's Zero Waste Strategic Plan including identified policies, programs, and initiatives.

Basis of Impact Analysis

Normally, the impacts of a proposed project are compared to the existing conditions (as of the date of circulation of the Notice of Preparation) as a baseline, in order to identify the project's impacts. In most situations, that meets the mandatory purpose of CEQA – to identify the impacts of the action that would be taken by a public agency. The NOP for this EIR was circulated in December 2007. The baseline for this analysis (using that definition) is therefore the conditions that existed in December 2007. The existing landfill operating conditions are generally those summarized in Section 1.4.3 of this EIR, and described in more detail in Section 2.0.³¹

However, neither this project nor the project site can be described by a snapshot in time. The “project” is an ongoing series of actions and operations that will occur over the operating life of the landfill (*i.e.*, when there is available capacity at the landfill and it is accepting waste), producing as an end condition, a closed landfill.³² There are circumstances in which defining the baseline requires knowledge of more than one point in time. Most of the project site is a functioning sanitary landfill and recycling facility that can and probably will continue to operate (including the associated legal non-conforming uses) in conformance with existing entitlements, whether or not this project is approved.

NISL currently accepts MSW from local jurisdictions through contractual agreements, and from non-contractual sources, both public and private. Allied Waste has identified contractual commitments for the next 14 years as shown in Table 3.0-1. Total tonnage from all sources in 2007 was ~~4,163,994.61~~ 61,163,978. As shown in Table 3.0-1, from 2010 to 2023, the total amount of contractually committed waste is about 6.2 million tons.

If the additional capacity represented by the proposed height increase is not approved, and the landfill continues to operate as it is currently operating (including taking in MSW at approximately the same rate as in recent years), the landfill operator has indicated that the landfill would close (*i.e.*, stop accepting MSW) in approximately the year 2016.³³ Other than ongoing maintenance and installation of the permanent cover, landfill operations would cease in 2016. If that happened, contractual agreements between the landfill and various communities for 2017 through 2023 could be fulfilled by sending contracted waste from local cities to other, more distant landfills such as Forward Landfill in Manteca, California (approximately 147 miles from NISL). Communities and private waste generators who do not have contracts with NISL would have to use their own resources to find another landfill.

³¹ As stated throughout this document, a working landfill is dynamic and circumstances change from day to day, month to month, and season to season. There is a certain amount of variation that should be expected during the year.

³² Even the “end condition” is not static. The waste will decompose, landfill gases will be generated, and the physical form of the landfill will slowly change in appearance.

³³ Gambelin, Donald. Personal Communications. 11 December 2008.

Since the existing zoning on the site does not allow for a solid waste transfer facility, the City of San José might be asked to approve land use permits for modifications to the landfill, D-shaped area, or the Recyclery to allow transfer of waste from collection vehicles to transfer trucks in order to deliver the contractual waste to a more distant location, which would require CEQA review.

Table 3.0-1: Contractually Committed Quantities of MSW	
Year	Annual Contract Volume (tons)
2010	346,416
2011	356,808
2012	491,112
2013	455,013
2014	468,664
2015	482,724
2016	497,205
2017	512,121
2018	394,816
2019	406,660
2020	418,860
2021	431,426
2022	444,369
2023	457,700
TOTAL	6,163,894
Note: Beginning in 2012, contractual volumes are expected to grow by 120,000 tpy because the City of San José will direct all commercial residual to NISL. Source: Don Gambelin, Allied Waste, 5/22/09.	

If the proposed project is not approved, the landfill operator could restrict quantities of incoming waste to less than in the recent past, and then the available capacity would be filled at a date later than 2016. Allied Waste representatives have stated that, if the incoming MSW quantities were to be restricted to only the contractually committed quantities,³⁴ the landfill could stay open through 2025. This is a possible operating scenario, with less than half of existing MSW volumes arriving at the landfill, declining to less than one tenth. While not the existing condition, it is a reasonable alternative that could occur under existing permits, at the property owner's discretion. The landfill could then remain open through 2025. Exactly what modifications would be made to landfill operations as a result of such a reduction in incoming waste cannot be precisely defined. For example, traffic delivering MSW to the site would decrease because incoming MSW would decrease, but traffic delivering recycled materials would not decrease. With a significant reduction in the number of waste hauling vehicles and in the quantity of MSW being landfilled, the working face of the landfill could be reduced in size, and/or the hours of operation for the landfill could be reduced, although neither is certain.

³⁴ "Contractually committed" means waste generated by communities or companies that have already contracted for landfill capacity, usually through a specific date (see Table 3.0-1).

The existing conditions also include a number of ongoing activities that are inconsistent with existing zoning and land use permits. If the project is approved, those activities (such as processing food waste on the paved area adjacent to the Recyclery) could continue. However, if the project is not approved, the City could require the property owner to stop those activities.

In summary, without the approval of additional capacity, NISL could continue to take in the waste at the same rate as it does today and close in 2016 or take in waste at a lesser rate and close later, in or after 2025. In either scenario, the total amount of waste taken in would be the same, but the duration in which that waste is received is different. Allied Waste has stated that their intention would be to modify landfill operations to the latter scenario if the project is not approved. Ultimately, it is unknown how the landfill operator will manage the waste stream (*e.g.*, continue receiving waste at current rates or receive waste at reduced rates) if the project is not approved. However, the above described scenarios are reasonable. Also, while the City has control over the total volume of waste received at the landfill, the City does not have direct control over the closure date of the landfill. Therefore, the approval of the proposed PD Zoning would allow indefinite landfill use as long as capacity remains at the landfill.

The impact discussions in the following sections are multi-faceted. Impacts of the proposed project are assessed against (a) existing conditions (as they are today on the ground, including proposed changes to existing operations), (b) existing conditions if the landfill continues to operate as it does today and would likely reach capacity in 2016 as a result, and (c) existing conditions if the landfill only takes in contractual waste and would likely reach capacity in 2025 as a result. The impact discussion also compares the environmental impacts that would result under existing, permitted, and project conditions for informational purposes.

Each impact is numbered using an alpha-numerical system that identifies the environmental issue. For example, **Impact HAZ – 1**, denotes the first impact discussed in the hazards and hazardous materials section. Mitigation measures (MM), avoidance measures (AM), and conclusions are also numbered to correspond to the impacts they address. For example, **MM NOI – 2.3** refers to the third mitigation measure for the second impact in the noise section. Mitigation measures are measures that would reduce significant impacts and avoidance measures are measures that would preclude the occurrence of an impact or would further reduce already less than significant impacts. All identified mitigation measures in the EIR not specifically listed on plans submitted by the project applicant shall be conditions of project approval.

The letter codes used to identify environmental issues are as follows:

<u>Letter Code</u>	<u>Environmental Issue</u>
<u>LU</u>	<u>Land Use</u>
<u>VIS</u>	<u>Visual, Aesthetics, and Lighting</u>
<u>TRAN</u>	<u>Transportation</u>
<u>NOI</u>	<u>Noise</u>
<u>AQ</u>	<u>Air Quality</u>
<u>CUL</u>	<u>Cultural Resources</u>
<u>GEO</u>	<u>Geology and Soils</u>
<u>HYD</u>	<u>Hydrology and Water Quality</u>
<u>HAZ</u>	<u>Hazards and Hazardous Materials</u>
<u>BIO</u>	<u>Biological Resources</u>
<u>UTIL</u>	<u>Utilities and Service Systems</u>

<u>Letter Code</u>	<u>Environmental Issue</u>
<u>EN</u>	<u>Energy</u>
<u>PS</u>	<u>Public Services</u>
<u>C</u>	<u>Cumulative</u>
<u>GCC</u>	<u>Global Climate Change</u>

3.1 LAND USE

“Land Use” is a term usually assumed in a planning context to refer to human use of land. That is how the term is generally used in this EIR. That does not mean that a land use cannot include habitat for animals, or open space, or plants. But the discussion of “land use” will usually focus on the activities of people, including impacts on or from those activities.

In order to minimize redundancy and to ensure that the various values and purposes implicit in the designation of property adjacent to Newby Island as a national wildlife refuge are recognized, most of the discussion of impacts and mitigations related to the habitat and inhabitants of the Refuge are discussed in Biology. The Refuge is not in the same classification as a park, for example, which can be an open space with habitat values but is intended to serve a specific human purpose – to provide recreation and outdoor activity areas for people to enjoy. A Refuge is, in the broadest meaning of the term, a place that provides shelter and protection – in this case, for ecosystems. While its protection and preservation is a human value, its occupants and users are not intended to be primarily human. Its integrity as a land use is entirely a function of its biological values; any significant or even substantive impact on resident species (especially special status species), habitat, habitat values, ecological systems, adversely affects the viability and purpose of the Refuge land use. Therefore, the discussion of “human-purposed” land uses, land use compatibility and impacts and mitigation for those impacts are addressed in **Section 3.1 Land Use** of this EIR. The discussion of the Refuge, impacts to its inhabitants and habitats, and mitigation for those impacts are primarily discussed in **Section 3.6 Biological Resources**. There are also references to specific effects (such as noise or vibration) from the project on the Refuge contained in almost every chapter of this EIR, in order to ensure that the interface is always clear. The definitive impacts that will occur in and upon the viability and survival of the habitats and inhabitants of the Refuge are most clearly and specifically identified, however, in **Section 3.6**.

3.1.1 Setting

The approximately 352-acre project site includes all of the Newby Island Sanitary Landfill (NISL), the visually distinct D-shaped area (which is part of NISL), and the Recyclery building and its paved surroundings (refer to Figure 1.0-2). All public access to all parts of Newby Island is by way of Dixon Landing Road, a paved public street. The entrance driveway crosses a bridge across Coyote Creek. Bicycles are allowed on Dixon Landing Road, but there is not an exclusive bike lane or sidewalk. Under current conditions, bicycles and pedestrians share the roadway with all vehicles that enter the site.

3.1.1.1 *Land Use Plans*

The NISL, except for the D-shaped area, is not located within the City’s Urban Service Area (USA)/Urban Growth Boundary (UGB). The D-shaped area and the Recyclery *are* located within the City’s USA/UGB (refer to Figure 1.0-5). The entire project site is located within the boundary of the City of San José’s *Alviso Planned Community* General Plan designation and the Alviso Master Plan.

General Plan

Currently, most of the NISL is designated as *Private Open Space* with a *Solid Waste Disposal Facility* overlay in the City of San José’s General Plan Land Use/Transportation Diagram and the Alviso Master Plan Land Use Plan. The *Private Open Space* designation is appropriate for privately-

owned lands used for low intensity, open space activity primarily within the USA. The *Solid Waste Disposal Facility* designation in the *Alviso Planned Community* is used to identify active landfill sites. Uses allowed on sites with this designation include landfills and ancillary activities such as ~~equipment maintenance, collection and processing of recycled materials, recycling, resource recovery, and composting, and energy/transformation operations.~~ The D-shaped area is currently designated as *Light Industrial*. The *Light Industrial* land use designation is intended for a wide variety of industrial uses and excludes uses with unmitigated hazardous or nuisance characteristics. The General Plan was amended by the City in 2002 to apply the *Light Industrial* designation to the site, and to include the D-shaped parcel in the City's Urban Service Area.

The Recyclery is currently designated as *Public/Quasi-Public* in the City's General Plan and Alviso Master Plan. The General Plan states that the *Public/Quasi-Public* designation is appropriate for a variety of public land uses, including corporation yards, fire stations, and water treatment facilities. This category is also used to designate lands used by some private entities, including public utilities and the facilities of any organization involved in the provision of public services such as gas, water, electricity, and telecommunications.

Zoning

The NISL, including the D-shaped area, is currently zoned R-M *Multiple Residence District*. The R-M zoning designation is intended for higher density residential development of up to 25 dwelling units per acre (du/ac). The Recyclery is currently zoned A(PD) – *Planned Development*. The current zoning on the Recyclery allows two phases of development. Phase I may include up to three buildings that may be used for recycling and administration (refer to **Section 1.0 Description of the Proposed Project** for more detail).

Phase II of the development allowed at the Recyclery by the PD zoning covers the paved area west of the main Recyclery building and the property immediately south and east of the building. Phase II could include expansion of the existing Recyclery building, or it can be used for preliminary processing of green waste and/or wood waste. The zoning defines in detail the purpose of the preliminary processing of green waste and/or wood waste, what actions it can include and what are the limitations on the activities. See also **Section 1.0**.

3.1.1.2 Existing Land Use

NISL

The approximately 342-acre landfill is a legal non-conforming land use in the City of San José because it has been used to landfill garbage since the 1930's. It has been operating as a landfill since prior to March 12, 1968 when the property was annexed into the City of San José. It has been continuously operating from the time it was established through the present. Newby Island was reclaimed from tidal marshland by the construction of the perimeter levee system in the late 1800's. The island was used for agricultural production including orchards and pastureland until 1932. In 1932, Newby Island Improvement Company began using the island as an unlined solid waste disposal facility. Between 1931 and 1956, the disposal and incineration of solid waste took place in selected northern and eastern portions of the island, including the D-shaped area. After 1956, burning was discontinued and subsequent waste disposal practices were more conventional.³⁵

³⁵ GeoLogic Associates. Geotechnical Evaluation for Proposed Vertical Expansion Newby Island Landfill. June 2008. Page 1.

The greater Alviso area was annexed into the City of San José in 1968, including Newby Island as an operating landfill. Under current permits, approximately 313 acres of the landfill (including the D-shaped area) can be used for refuse disposal and the remaining 29 acres consists of sloughs and marshland. The D-shaped area is surfaced with hard-packed soil with some graveled areas over buried waste. The existing permits for NISL allow for landfilling and final grading to a maximum height of approximately 150 feet (NGVD29). The current remaining capacity at the landfill is about 8.4 million cubic yards as of December 31, 2008. NISL is permitted to operate for 24 hours per day, Monday through Saturday. The facility currently operates from 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday. The landfill is closed on Sundays, Thanksgiving, Christmas, and New Year's Day. The maximum tonnage permitted to be disposed in any 24-hour period ("gate capacity") is 4,000 tons. According to the Post-Closure Plan for the landfill, the landfill has an estimated closure date of 2025. The existing landfill height, where the additional height is proposed, varies between 100 and 130 feet (NGVD29). Since this is within an active landfilling area, the elevation changes continuously. The landfill is currently permitted with a maximum height of 150 feet (NGVD29).

Materials that come to NISL include waste that is disposed of in the landfill; clean soil that is used for cover and for temporary roadways; construction and demolition (C&D) debris that is sorted, recycled, and processed for re-use both on-site and elsewhere; and materials that are used for alternate daily cover (ADC), which include but are not limited to sludge from the WPCP, low-level contaminated soil, and green waste.

A site plan of the existing use areas within the project site is provided as Figure 1.0-6. The primary components of NISL include Recyclery/landfill scales, landfill gas to energy plants/landfill gas export plant, landfill gas flares, landfill offices, construction and demolition recycling area, maintenance shops, stormwater detention ponds, a leachate management system, fueling facilities, and compost windrows. These components are described briefly below. See also **Section 1.0 Description of the Proposed Project**. These are in addition to the working face where waste is currently being processed. The existing working face is generally located in the southwest quadrant of the landfill at the present time.

Recyclery/Landfill Scales

There are four scale houses and six scales on the project site, serving the landfill and the Recyclery. At least one scale house and scale is staffed at all times when the gate is open.

Landfill Gas to Energy Plants/Landfill Gas Export Plant/Flares

There is an electric generating facility (*i.e.*, the GRS facility) on the southeastern portion of NISL that collects landfill gas through a system of wells and headers. The facility uses landfill gas to produce electricity. Some of the gas is compressed and exported to the WPCP for use in wastewater treatment operations. The landfill gas is used to fuel reciprocating motors that provide compressed air needed by the WPCP. There are also two landfill gas destruction flares that are used as back-up to the energy plant/export plant to properly manage the landfill gas for air quality purposes.

Landfill Offices

The IDC landfill offices are located near the northeast corner of the landfill. There are two office trailers and parking.

Construction and Demolition Recycling Area

Construction and demolition debris are processed on top of and near the center of the landfill. C&D wastes are unloaded from incoming haul vehicles at the processing area, and are sorted, separated, and processed.

Salvaging at the Landfill

Organized, managed salvaging takes place on the landfill's active filling area or a designated area near the active filling area. Salvage is stockpiled near the active area and removed for processing and recycling.

Landfill Maintenance Shop

A metal building in the central portion of the landfill site is used for landfill equipment and vehicle repair maintenance. There is a fueling station next to the shop building.

Stormwater Detention Ponds

The surface stormwater runoff and subdrain water within the NISL is diverted and channeled within a series of drainage ditches and swales to the main stormwater retention pond located in the southern portion of the NISL (see main stormwater retention pond on Figure 1.0-6). Runoff from the Recyclery (including the food waste area) is also conveyed to this main stormwater retention pond.

The runoff from the non-active portion of the landfill flows directly to Coyote Creek. The runoff from the compost areas are conveyed to two separate compost runoff retention ponds located adjacent to the compost areas (see Figure 1.0-6).

Leachate Management System

Leachate from all 14 sumps on the landfill is pumped into mobile storage tanks located adjacent to the landfill maintenance shop in the center of the NISL, where it is loaded into tanker trucks for transport to a permitted treatment plant (see Leachate Holding Tanks on Figure 1.0-6).

Compost Windrows

The permitted compost processing area is 18 acres in size and includes open windrows and curing areas, and aerated static piles. Incoming organics (such as green waste, food waste, and wood waste) are processed first at the Recyclery, then hauled by walking-floor trucks to the northerly end of the landfill and composted in turned windrows.³⁶ The food waste is typically mixed with other compostable materials and has, ~~in the past,~~ been composted in either aerated static piles or in-vessel composting equipment. ~~At this time, no in-vessel composting is being done.~~ Green waste is mixed with a bulking agent (usually ground wood waste) and composted in open windrows.

³⁶ Not all incoming organic material is composted. Incoming organic material is also used for erosion control on- and off-site, biofuel, mulch, and alternative daily cover.

The Recyclery

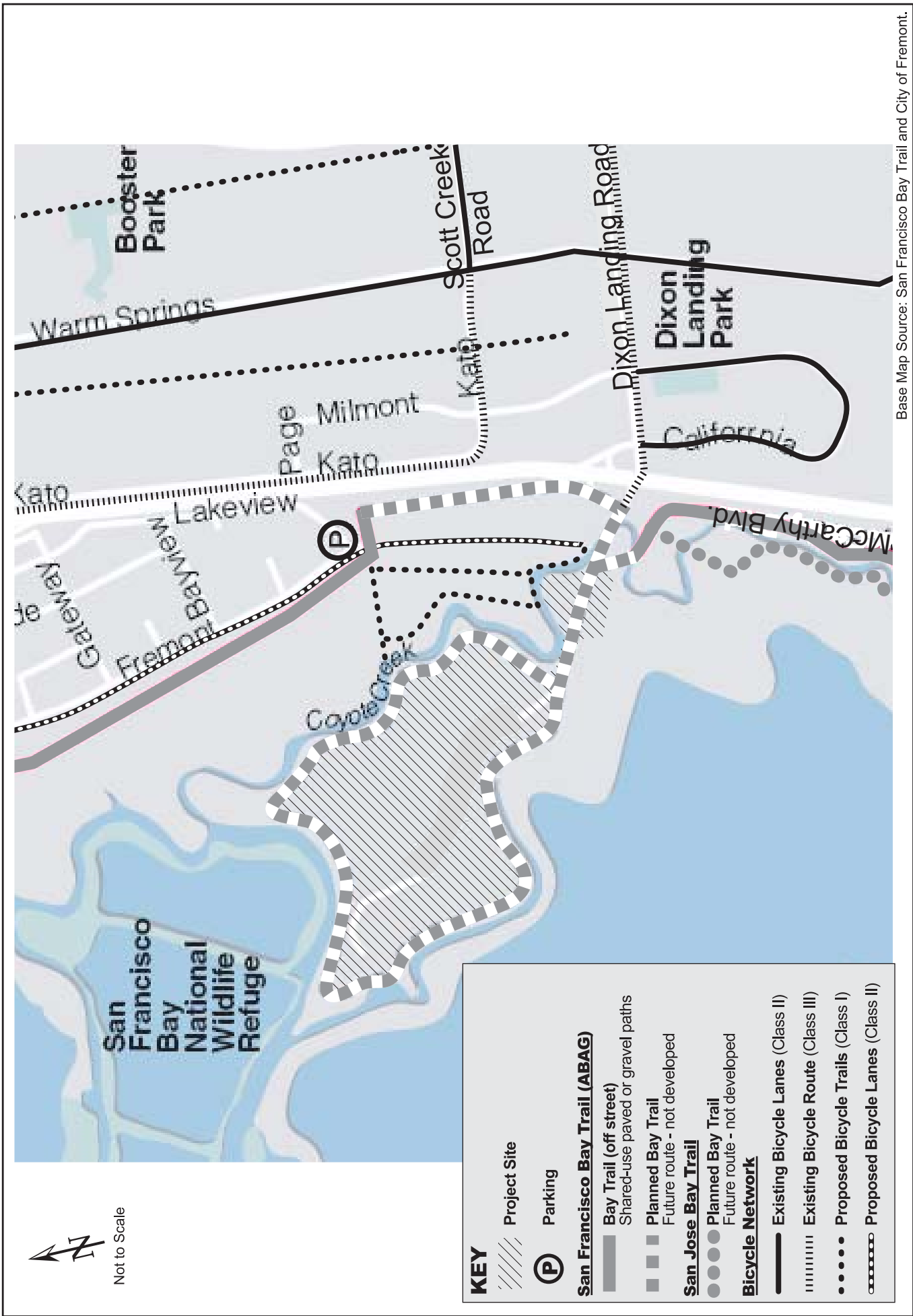
The Recyclery is located near the primary entrance of the project site, on the south side of the main access road (refer to Figure 1.0-6). The Recyclery processes materials for recycling including wood waste, green waste, and food waste. The existing zoning allows green waste and wood waste to be ground and managed outside the building (see Recyclery Greenwaste Receiving and Grinding Area on Figure 1.0-6); lumber is ground and processed (see Recyclery Clean Lumber Reclamation and Processing area on Figure 1.0-6) and the ground materials are transported to the compost windrow areas on NISL (see composting windrows on Figure 1.0-6). Although not allowed by the current zoning, food waste is also processed outdoors on the Recyclery site and subsequently hauled to the composting area. The Recyclery does not receive or process municipal solid waste (MSW). The City's PD Permit for the Recyclery does not allow MSW and there is no evidence that there has been CEQA review done for the processing of MSW at the Recyclery. For the Recyclery to receive and process MSW, a subsequent rezoning and additional environmental review would be required.

The Allied Waste collection company that collects municipal solid waste from commercial and residential sources has their offices and maintenance facilities at the Recyclery (see hauling company offices and truck shop on Figure 1.0-6). The existing PD zoning allows the buildings on the eastern portion of the Recyclery to be used only for office and administrative functions, a public recycling and buyback center, a recycling education center, and a materials recovery center.

3.1.1.3 *Surrounding Land Uses*

The immediate outer boundary of Newby Island is Coyote Creek and South Coyote Slough. Beyond the immediate perimeter, uses within 1,000 feet of the project site include the Don Edwards National Wildlife Refuge and wetlands southwest, west, and northwest of the site; and the WPCP and biosolids lagoons south of the project site. Property immediately adjacent to the east is being managed as restored wetlands. Lands to the northeast and east of the restored wetlands are developed with commercial/light industrial uses. The nearest residential use is located approximately 0.4 mile east of the project site at Dixon Landing Road and California Circle in the City of Milpitas. The nearest residences in San José are in Alviso, almost two miles to the southwest. An aerial photograph with surrounding uses is shown on Figure 1.0-3. Figure 1.0-5 shows distances from Newby Island.

Figure 3.0-1 shows the existing and planned locations for the San Francisco Bay Trail in the project site vicinity. The current plans for the San Francisco Bay Trail show the Trail being extended from its current terminus near the intersection of Fremont Boulevard and Lakeview Boulevard in Fremont, a loop around the landfill on top of levees, to connect to the stretch that runs along McCarthy Boulevard to the south, in Milpitas. The access to Newby Island shown for the trail is Dixon Landing Road, a public street also used by all of the garbage and haul trucks and other traffic that comes to Newby Island. The San José Bay Trail Master Plan includes a reach south of the Dixon Landing Road and McCarthy Boulevard extension, on the west side of Coyote Creek (see Figure 3.0-1). In addition, the City of Fremont's 2005 Bicycle Master Plan identifies existing and future bicycle lanes, routes, and trails east of the project site, as shown on Figure 3.0-1. The Lower Guadalupe River Trail is also in the project vicinity. The Lower Guadalupe River Trail is located about three miles (bird's eye view) southwest of the landfill. Note that this trail does not provide access to the landfill.



Base Map Source: San Francisco Bay Trail and City of Fremont.

EXISTING AND FUTURE BAY TRAIL &
CITY OF FREMONT PLANNED BICYCLE PATHS

FIGURE 3.0-1

3.1.2 Land Use Impacts

3.1.2.1 *Thresholds of Significance*

For the purposes of this project, a land use impact is considered significant if the project would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with any applicable habitat conservation plan or natural community conservation plan;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use;
- Induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere;
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere; or
- Result in substantial shading of existing residences and/or a public park or open space area.

The project does not require or propose a General Plan amendment. The project proposes to rezone the project site from R-M and A(PD) to *A(PD) – Planned Development* to recognize the current landfill and related operations and practices, and increase the permitted top elevation of the landfill from 150 to 245 feet (NGVD29). This increase in elevation will increase the capacity of the landfill by approximately 15.12 million cubic yards, excluding cover materials. The proposed conceptual site plan is shown on Figure 1.0-10.

In addition to the increased landfill height and capacity, the project includes substantial changes to the existing and permitted uses on the D-shaped area, and some refinements to the existing site plan and changes in operations on the Recyclery and landfill properties that the property owner believes may be necessary or desirable for the remaining life of the landfill. Table 3.1-1 summarizes the existing uses and examples of the proposed activities/changes.

Table 3.1-1: Summary of Existing Operations and Examples of Proposed Activities/Changes		
Project Component	Existing Operations	Examples of Proposed Activities/Changes
Sanitary Landfill	Permitted top elevation of 150 feet (NGVD29), with a remaining capacity of approximately 8.4 million cubic yards as of December 31, 2008.	Increase the permitted top elevation to 245 feet (NGVD29), which will increase the landfill capacity by approximately 15.12 million cubic yards (excluding cover materials).
	There are four scale houses and six scales on the project site, serving both the landfill and the Recyclery.	Possibly move the four landfill scales to the east, closer to the site entrance, in the future. Depending on the final configuration, the landfill scales may have to be located on the D-shaped area to accommodate truck queuing.
	There is an existing landfill gas to energy plant (GRS facility) on the southeastern portion of NISL that collects landfill gas from the landfilled waste and produces electricity. There are also two landfill gas destruction flares that manage the landfill gas for air quality purposes.	Possibly relocate and expand the GRS facility to the east, onto the D-shaped area and use some of the energy generated by the plants for on-site operations in the future. The flares would remain operable for regulatory conformance.
	The landfill offices and employee facilities are located on top of the landfill in two office trailers, with parking.	Relocate the landfill offices elsewhere on the landfill when the current location is ready to receive its final cover.
	C&D debris is delivered in haul vehicles to the processing site near the central portion of the landfill. C&D wastes are unloaded, sorted, separated, and processed.	The equipment used for recycling C&D waste is portable and will be moved as necessary to accommodate landfill development and final grading up to and including installation of final cover. Criteria for relation will include off-site visibility and compatibility with adjacent uses. Changes in both the materials diverted and the equipment used to process the materials may occur in the future to reflect market demands, advances in processing technology, and changes in the incoming material stream.
	Organized, managed salvaging takes place on the landfill's active filling area or a designated area near the active filling area. Salvage is stockpiled near the active area and removed for processing and recycling.	Salvaging activities would not significantly change during the landfill's operating life.
	The metal building in the central portion of the landfill site is used for landfill equipment and vehicle repair	The maintenance shops may be relocated onto a different part of the landfill or onto the D-shaped area or onto the

Table 3.1-1: Summary of Existing Operations and Examples of Proposed Activities/Changes

Project Component	Existing Operations	Examples of Proposed Activities/Changes
Sanitary Landfill (continued)	maintenance. There is a fueling station next to the shop building.	Recyclery. The fueling station may be relocated with the maintenance facility.
	The surface stormwater runoff and subdrain water within the NISL is diverted and channeled within a series of drainage ditches and pipes to various locations, including the main stormwater retention pond located in the southern portion of the NISL.	The stormwater detention pond located in the southern portion of NISL will be replaced with two new detention ponds at different locations on-site and some of the on-site drainage would be conveyed (either by gravity flow or by pumping) to those locations.
	Leachate from all 14 sumps on the landfill is pumped into mobile storage tanks located adjacent to the landfill maintenance shop in the center of the NISL, where it is loaded into tanker trucks for transport to a permitted treatment plant.	The leachate holding tanks and ancillary facilities may be relocated to the D-shaped area. An existing pipeline between the landfill and the WPCP may be used to directly convey leachate from the landfill to the WPCP (see Figure 1.0-8).
	The permitted compost processing area is 18 acres in size, including open windrows and curing areas, and aerated static piles (which sometimes include use of plastic bags). Incoming organics (including greenwaste, food waste, and wood waste) are processed first at the Recyclery, then hauled to the northerly end of the landfill and composted.	The receiving and processing functions may be co-located with the windrow area. All composting functions may be relocated to different areas of the landfill property in order to allow for completion of the landfill plan. In-vessel composting may be used.
		A public drop-off for bulky discards and/or recyclables may be located on the landfill site. A drop-off and storage facility for HHW may be located on the landfill site (or the D-shaped area or the Recyclery).
D-Shaped Area	Hauling company offices, maintenance, and employee facilities are presently located on the Recyclery property in buildings north of the Recyclery and on the D shaped area, although not allowed by the existing zoning or permits.	Hauling company administration, office, and support uses, including employee facilities and parking may remain on the Recyclery property and on the D-shaped area.
	Wood waste and processed compost are sometimes stored on the D-shaped area.	Processed wood waste and compost may continue to be stored on the D-shaped area.
		A public drop-off for bulky discards and/or recyclables may be located on the D-shaped area. A drop-off and storage facility for HHW may be located on the

Table 3.1-1: Summary of Existing Operations and Examples of Proposed Activities/Changes

Project Component	Existing Operations	Examples of Proposed Activities/Changes
		D-shaped area (or the landfill or the Recyclery).
The Recyclery	The Recyclery now processes wood waste, green waste, and food waste outside the building, although handling food waste is not allowed by the existing zoning or PD Permits. Wood and green waste is stockpiled, ground, and processed and the processed materials are transported to the compost windrow areas on the landfill. Some of the recyclable materials separated out of mixed waste loads that are delivered to the landfill are transferred to and processed at the Recyclery.	The proposed rezoning proposes to allow preliminary processing of food waste on the paved area west of the Recyclery, which is incorporated into the composting operation elsewhere on the site.
	The Recyclery is a MRF that currently accepts source separated recyclables and processes them for market. Incoming materials include glass, metal, plastics, paper, wood, and combinations of materials.	The Recyclery will continue to operate as a materials recovery facility. As markets, market demands, recycling programs, and recycling technology change over time, it is likely that the materials coming into the Recyclery, the materials recovered, and the technology used to process them will change accordingly. Some of the recyclable materials that come into the Recyclery will continue to be processed or managed on the landfill site.
	Although not allowed by the current zoning, the waste hauling company that collects municipal solid waste from commercial and residential sources has their offices, employee facilities, and maintenance facilities at the Recyclery and on the D-shaped area.	The hauling company may continue to have their offices, employee facilities and vehicle maintenance shops on the Recyclery site and the D-shaped area.
	Recyclery offices and employee facilities are in the main building and in smaller buildings on-site.	Support uses will remain on Recyclery site, including on-site parking for employees, visitors, and haul vehicles.
		A public drop-off for bulky discards and/or recyclables may be located on the Recyclery site. A solid waste transfer facility may be located on the Recyclery site. A drop-off and storage facility for HHW may be located on the Recyclery site (or the landfill or D-shaped area).

3.1.2.2 *General Plan and Zoning Ordinance Conformance*

The existing and proposed landfill, recycling and corporation yard land uses on-site are consistent with the site's existing land use designations. Therefore, the project is consistent with the City's General Plan Land Use/Transportation Diagram. As discussed above, the project proposes to rezone the project site to recognize the current landfill and related operations and practices, and increase the permitted top elevation of the landfill, which will increase the capacity of the landfill. The project also includes refinements to the existing site plan and incremental changes in operations that may be necessary or desirable for the remaining life of the landfill as outlined in Table 3.1-1.

Most of the modifications proposed by this project are not new land uses on the site, but changes in the scope or location of existing land uses, including landfilling, recycling, and the management of the equipment required for those operations. Uses legally allowed on the D-shaped area and the Recyclery site will change, however, if the PD rezoning is approved. Although many of the uses that the rezoning proposes on those two sites are there already, the corporation yard functions (*e.g.*, administrative office, vehicle and equipment storage and maintenance, employee facilities and parking) are not allowed by the existing zoning and permits. Brand new uses which are not located on the project site now but could, in the future, be located anywhere (no specific location is proposed, but the uses are proposed on all three subareas) include a solid waste transfer facility on the Recyclery, HHW collection and storage facility, and public turn-in facilities (refer to Table 1.4-1). As discussed previously, details regarding the implementation or scope of these uses, including size, specific location, and operations, are unknown at this time. The approval of the proposed rezoning would allow for these uses on-site; however, PD Permits will be required for a solid waste transfer facility, public education facility, HHW turn-in and storage facility, and public drop-off location for waste and/or recycling when sufficient details regarding these uses are known and before construction and operation of the uses on-site would occur. Subsequent environmental review will also be required at the PD Permit stage to confirm that these uses would not result in new or substantially more severe impacts than the proposed project.

The end use of most of the landfill after it closes is planned to be passive open space, except for auxiliary uses like the GRS facility. Structures and buildings on the landfill itself will be removed when the landfill closes, and many of the uses proposed for the D-shaped area are likely to continue, including a corporation yard. The Recyclery is anticipated to continue operating after the landfill closes.

3.1.2.3 *Land Use Compatibility*

The project site is not part of a habitat conservation plan or natural community conservation plan. There is no existing housing on the project site, therefore, the proposed project would not displace any housing or people, or necessitate the construction of replacement housing elsewhere. The project would not induce substantial population growth in the area, either directly or indirectly. The proposed increase in capacity would allow for the landfill to continue accepting waste at existing rates and meet their existing contractual obligations. While local landfill capacity is a concern, the available capacity at Newby Island would not encourage or discourage development. If there was insufficient capacity at Newby Island, waste generated from uses within the City would be transported elsewhere. The project would serve, not induce, existing and planned growth in the City.

Impact LU – 1: The proposed project would not conflict with a habitat conservation plan or natural community conservation plan because there are none in the area; for the reasons stated in the previous paragraph, the project would not displace

existing housing or people, or induce substantial population growth in the area. **(Less Than Significant Impact)**

Impacts from Landfill Height

Under the proposed project, the maximum landfill height would be 245 feet (NGVD29). Under Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace, any construction or alteration of more than 200 feet in height above the ground level is a concern to the Federal Aviation Administration (FAA) because of possible interference with aircraft. According to the FAA Advisory Circular 150/5200-33B, Section 4-2(a), the Environmental Protection Agency (EPA) requires owners or operators of existing landfills that are proposed for lateral expansions that are located within 10,000 feet (or about two miles) of any airport runway end used by turbojet aircraft or within 5,000 feet (or about one mile) of any airport runway end used only by piston-type aircraft, to demonstrate successfully that the proposed landfill height would not be a hazard to aircraft. NISL is located over five miles from the Norman Y. Mineta San José International Airport and Moffett Field and proposes a vertical expansion of an existing landfill. The project applicant has filed a Notice of Proposed Construction or Alteration with the FAA and is waiting for a determination of “No Hazard” from the FAA. ~~Given the landfill’s location and distance from the nearby airports, it is not anticipated that the proposed height expansion of the landfill would cause safety hazards to aircraft or substantially interfere with aircraft operations. Since the circulation of the Draft EIR, the project applicant has received determinations from the FAA that the proposed landfill height increase up to 245 feet would not constitute an obstruction or hazard to aircraft operations subject to (a) marking or lighting in accordance with FAA standards, and (b) notifications to the FAA when the specified heights are reached. Compliance with these FAA “Determination(s) of No Hazard” will be included in the PD permit conditions, therefore, the project would not cause safety hazards to aircraft or substantially interfere with aircraft operations.~~

In addition, landfills are known to attract large numbers of wildlife, particularly birds. Birds can pose a threat to aircraft safety. Bird hazards include bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants. Per the FAA’s Advisory Circular 150/5200-33B, new or expanded waste management facilities within five miles of an airport need to notify the airport and FAA. NISL is located over five miles from the Airport and while the project proposes to expand the capacity of the landfill, the project would not increase existing operations. In addition, with the ongoing implementation of the Nuisance Species Abatement Plan (NSAP) identified in **Section 3.6 Biological Resources**, the number of gulls at the landfill would decrease.

While the applicant states that the existing anticipated closure date of 2025 would not change with the proposed project, the City has no direct control over the closure date of the landfill. Therefore, the approval of the project would allow indefinite landfill operation as long as capacity remains. This is also the existing situation, but the proposed height increase extends the capacity, which allows more waste and/or waste over a longer time period, and may extend the life of the landfill.

NISL’s existing permit (SWFP No. 43-AN-003) allows for the disposal of an annual daily average of 3,260 tpd of waste and a maximum of 4,000 tons on any one operating day. Table 1.4-3 provides a summary of NISL’s yearly average tonnages of waste disposed for 1998 – 2007.

The proposed height increase would increase the landfill’s total capacity by approximately 15.12 million cubic yards; which means that the total volume of waste disposed at the landfill would increase above what could otherwise be placed there. Under the existing SWFP, (without the proposed height increase) the landfill could continue to operate until capacity is fully used up

(estimated to occur in 2016) or, at some point, only take in an amount equivalent to existing contracts, which end in 2023. It is estimated by the landfill operator that the inbound disposal volume would be restricted beginning in 2010 in order to meet existing contractual obligations. The proposed height expansion would continue to allow other waste from the region to be disposed at NISL, within the limits of the current operating permits. The additional capacity would allow the landfill to continue to accept waste quantities from the region similar to those in Table 1.4-3, extending its usefulness.

If the landfill continues to operate at a level and in a manner generally consistent with its current operations, there would not be new significant land use impacts from the landfill other than the new, greater physical height. As mentioned above, the project would extend the useful life of the landfill. This means that any existing impacts from landfill operations would continue to occur for a longer period of time under the proposed project because the existing landfill operations would continue for a longer period of time.

The substantial distances and waterways between the landfill and neighboring properties would continue to separate landfilling activities from other human activities and most sensitive habitat. If the project is not approved, the existing impacts of the landfill operations would likely cease in 2016 if the landfill continues to operate as it does now until the existing capacity is reached, or the existing impacts could be of less magnitude and displaced elsewhere if the landfill tapers the amount of incoming waste to its contractual amounts only and the non-contractual waste is diverted from Newby Island to another landfill. Diverting waste to another landfill would likely result in similar or greater impacts in comparison to the proposed project (see discussions in **Sections 3.4 Air Quality, 3.12 Energy, and 6.5 Global Climate Change**).

Currently, the project site is surrounded by levees, sloughs, and waterways which separate it from a wildlife refuge, wetlands, the WPCP, and commercial/light industrial uses. It is not anticipated that the proposed height increase would divide any community or result in any new or substantial land use compatibility issues with the existing surrounding land uses. A separate discussion of wildlife impacts associated with gulls is included in **Section 3.6 Biological Resources** of this EIR.

The project site is located near former salt ponds that are part of the larger South Bay Salt Pond Restoration Project. The restoration project includes acquisition of the salt ponds, landscape-level wetland restoration, and improvement of the physical, chemical, and biological health of the San Francisco Bay.³⁷ Impacts to the salt pond restoration project and other biological resources are discussed in **Section 3.6 Biological Resources**. Impacts related to geotechnical stability of the proposed landfill height are discussed in **Section 3.7 Geology and Soils**. As discussed in those sections, the proposed project would not result in significant biological or geological impacts.

The end use of most of the landfill after it closes is planned to be passive open space, except for auxiliary uses like the GRS facility. Structures and buildings on the landfill would be removed after the landfill closes. The proposed height increase would result in creating a hill that is up to 245 feet (NGVD29) in height. The proposed height would be consistent with the post-closure use of the site as open space.

The closed landfill will be visible at a somewhat greater distance because it will be taller than is currently allowed. See **Section 3.2 Visual and Aesthetics** for a discussion of visibility.

³⁷ South Bay Salt Pond Restoration Project. [Project Description](http://www.southbayrestoration.org/Project_Description.html). N.d. Available at: http://www.southbayrestoration.org/Project_Description.html. Accessed 16 October 2007.

The Recyclery is anticipated to continue operating after the landfill closes.

Impact LU – 2: While the project would extend current impacts for a longer period of time, the proposed landfill height increase would not interfere with aircraft operations according to the FAA determination referenced above. Since there is no adjacent or proximate “established community,” as discussed in the preceding section, the proposed landfill height increase would not divide an established community nor would it result in any other significant land use impacts to identified land uses impacts.

Shade and Shadow Impacts

While the project would increase the maximum permitted height of the landfill to 245 feet (NGVD29), the project would not result in a substantial increase in shading of the adjacent wildlife refuge compared to existing conditions. The additional height proposed for the landfill would apply to a relatively small percentage of the surface area near the center area of the landfill. In other words, the landfill would slope up and peak at 245 feet (NGVD29) in the center – the entire landfill area would not be 245 feet (NGVD29). The increase in shade and shadow from the landfill would be created by the proposed highest point of the landfill, which would cast the largest shadow. Shadow impacts from projects are typically discussed for three different times of the year: December 21, June 21, and March/September 21 (the equinoxes). Maximum shading occurs on December 21, the winter solstice, when the sun is at the lowest angle above the horizon. The vast majority of solar energy is received between 9:00 AM and 3:00 PM. Shadow length and bearing calculations were completed to determine whether the proposed maximum permitted height for the landfill would cast substantial shadows on the adjacent wildlife refuge. The longest shadows from the peak of the landfill at 245 feet would be approximately 860 feet in length. The distance between the proposed peak of the landfill and the base of the landfill (at least 1,500 feet) is greater in length than the shadows that would be created by the proposed height. Since the footprint of the landfill is extremely large, the shadow cast by the highest point would shade the landfill itself. For this reason, the proposed project would not result in significant shade and shadow impacts.

Impact LU – 3: The proposed project would not result in significant shade or shadow impacts.
(Less Than Significant Impact)

Impacts from New Land Uses

Corporation Yard Activities

A specific proposal to place a waste hauling company corporation yard on the D-shaped area was the subject of an EIR previously prepared by the City. In 2002, the City certified a Final EIR that addressed the impacts of placing light industrial uses on the D-shaped area, and approved the General Plan land use designation that would allow it to be located there.³⁸ The only significant impact identified in that Final EIR was the possibility that people working in the area that were unrelated to the garbage or wastewater treatment facilities might complain about the odor or other effects of those uses, resulting in operating constraints being placed on the facilities. The policy level mitigation for that impact was a new General Plan policy that only uses compatible with the garbage or wastewater facilities should be allowed next to them. A corporation yard for a waste hauling company would be

³⁸ City of San José. Final Environmental Impact Report for Newby Island General Plan Amendments and Planned Development Rezoning. May 2002.

compatible with the adjacent landfill. Because the site is so close to the WPCP, the project would need to include air conditioning and ventilation for the administrative offices, and would dedicate an odor easement to the City. With those features and appropriate site design to minimize noise and light spillover, the land use impacts from the proposed use would be less than significant.

The 2002 Final EIR concluded that locating the corporation yard on the D-shaped area would not result in significant land use compatibility impacts.

There have been no new land uses introduced within approximately one-half mile of the D-shaped parcel since the Final EIR was certified. Fremont Boulevard and the San Francisco Bay Trail have, however, since been extended to a point that is approximately one-half mile from the D-shaped area. The previously prepared Final EIR identified the extension of Fremont Boulevard, the City of Fremont's General Plan designations (commercial and industrial) for the nearby property, and the extension of the San Francisco Bay Trail adjacent to Fremont Boulevard and around the levees on Newby Island, as foreseeable future conditions. Given the D-shaped area's distance from any sensitive receptors and its relative isolation behind levees, the EIR did not identify any significant land use conflicts likely to result from placing the proposed *Light Industrial* land use designation and future corporation yard on the D-shaped area.³⁹ The City subsequently approved the General Plan land use designation and the policy change (see the discussion of Solid Waste Policy No. 4 in Section 7.2.1.3 of this EIR).

Placing the corporation yard on the D-shaped parcel as proposed by this project would still not introduce any new land use compatibility impacts.

Impact LU – 4: The proposed project, including the proposed use of the D-shaped area for a corporation yard for the waste hauling company, would not create any new land use compatibility impacts. **(Less Than Significant Impact)**

The proposed rezoning will also allow most of the corporation yard activities to be located on the Recyclery property. This would allow more offices, employee facilities, parking, vehicle storage, equipment storage, vehicle and equipment maintenance, container repair and bin painting, and a vehicle/wheel wash system. None of these uses are permitted now. While it is unlikely that all of these uses will be operated on the site, it would be possible. Some of them are on the property now. The uses could cause increased noise levels (especially since haul vehicles are usually serviced at night) and more light at night.

There is no development near the Recyclery. Depending on the physical arrangement of uses, orientation of buildings and service bays' location, design and angle of outdoor light fixtures, there could be light and noise impacts on the habitat areas west of the Recyclery. However, the project does not propose any new activities that generate loud noises and vibration substantially greater than existing levels within 700 feet of California clapper rail nesting habitat (see Figure 1.0-9). For this reason, new uses on the Recyclery property would not result in significant light and noise impacts.

Impact LU – 5: The proposed location of corporation yard activities on the Recyclery property, with no new activities that generate loud noises and vibration substantially greater than existing levels within 700 feet of California clapper rail nesting habitat, would not result in significant land use compatibility impacts relating to light or noise. **(Less Than Significant Impact)**

³⁹ *Ibid*, pages 26-28.

Drop-Off Facilities

Public turn-in of HHW generally occurs on specified days and in Santa Clara County, it is usually by appointment only. The very long queues that occurred during the early years for such events are not common. Likewise, public drop-off of bulky discards for recycling or disposal has occurred in past years at Newby Island for the residents of the City of Milpitas. Usually the events occur on a Saturday, when landfill traffic is minimal (see Table 3.3-3).

A HHW facility for turning in and storing batteries, oil and paint was previously approved on the site where the existing maintenance building is located, east of the Recyclery building, by the County in 1995.⁴⁰ There is such a building at the location indicated in the lease records for the HHW facility, but its operation as a HHW facility was never implemented. The proposed zoning would allow a HHW drop-off facility at the Recyclery, NISL or on the D-shaped area at some point in the future. Nothing specific is currently proposed. Any future HHW facility would be designed consistent with local, state, and federal regulations, and would require a PD Permit and subsequent environmental review to ensure it does not result in new or greater impacts than those identified in this EIR.

The proposed rezoning would allow a public drop-off area for waste and/or recycling to be located on the landfill, D-shaped area, or at the Recyclery. A drop off for recycling has been operated on the Recyclery site in the past. The landfill operators may request permits to place an “integrated public service facility” somewhere on the site, where recyclables, bulky discards, and items suitable for reuse could be dropped off and stored or disposed. The specific design of such a facility would be subject to the City’s land use permitting process, and could require subsequent CEQA review. This would include consideration of the nearby San Francisco Bay Trail alignment if placed on the D-shaped area, evaluation of the likelihood that any part of either facility might attract gulls or vermin, and other compatibility issues for the adjacent Wildlife Refuge.

Since there are no specific design plans or detailed operational information for either type of facility (HHW facility or public drop-off area), the interface between these facilities and both adjacent land uses and other landfill operations cannot be evaluated. When specific facilities are proposed in the future, those details will be evaluated through a PD Permit from the City of San José and subsequent CEQA review.

Impact LU – 6: The proposed project, including the future placement of a HHW turn-in and storage facility and public drop-off of waste and recyclables in conformance with applicable land use permits, would not create any new land use compatibility impacts. **(Less Than Significant Impact)**

3.1.2.4 Other Impacts

The project does not propose to expand the footprint of the landfill, change the access to Newby Island, or otherwise interfere with the future San Francisco Bay Trail alignment or City of Fremont’s planned bicycle paths. The landfill height increase will not, therefore, preclude locating the San Francisco Bay Trail on its adjacent levees.

The proposed project is not designated as farmland or zoned or used for agricultural purposes. Nor is the project site subject to a Williamson Act contract. In addition, there are no adjacent or nearby agricultural uses that would be impacted by the proposed project. For these reasons, the proposed

⁴⁰ BFI. Report of Station Information. 1996. Page 5.

project would not convert farmland to non-agricultural uses, conflict with existing zoning for agricultural use or a Williamson Act contract, or result in the conversion of farmland to non-agricultural use.

There have been complaints about windblown waste into the Refuge from the landfill, but the City has not found any records of specific details or confirmed complaints. The approval of the project would extend the useful life of the landfill and therefore, could result in a greater total amount of windblown waste in the Refuge overtime. However, the proposed project would not increase the amount of daily incoming waste at the landfill and therefore, would not likely increase the amount of windblown waste on a daily basis. The City, as part of the PD Permit for this project, will review the landfill's existing litter control plan and may require additional measures for litter control.

Impact LU – 7: The proposed project would not impact the future Bay Trail alignment or City of Fremont planned bicycle paths; convert farmland to non-agricultural uses; conflict with existing zoning for agricultural use or a Williamson Act contract; or result in the conversion of farmland to non-agricultural use. The City shall review the landfill's existing litter control plan (see **AM LU – 7** below) and require additional measures to control litter (if necessary). (**Less Than Significant Impact**)

3.1.3 Mitigation and Avoidance Measures

AM LU – 7: As part of the City's review for the Master PD Permit for the project, the City shall review the landfill's existing litter control plan and require additional measures if necessary.

3.1.4 Conclusion

Impact LU – 1: The proposed project would not conflict with a habitat conservation plan or natural community conservation plan; displace existing housing or people; or induce substantial population growth in the area. (**Less Than Significant Impact**)

Impact LU – 2: The proposed landfill height increase would not divide an established community or result in new significant land use impacts. (**Less Than Significant Impact**)

Impact LU – 3: The proposed project would not result in significant shade or shadow impacts. (**Less Than Significant Impact**)

Impact LU – 4: While the project may extend current conditions for a longer period of time than would otherwise be the case, the proposed project, including the proposed use of the D-shaped area for a corporation yard for the waste hauling company, would not create any new land use compatibility impacts. (**Less Than Significant Impact**)

Impact LU – 5: The proposed location of corporation yard activities on the Recyclery property, with no new activities that generate loud noises and vibration substantially greater than existing levels within 700 feet of California clapper

rail nesting habitat, would not result in significant land use compatibility impacts relating to light or noise. **(Less Than Significant Impact)**

Impact LU – 6: The proposed project, including the future placement of a household hazardous waste turn-in and storage facility and public drop-off of waste and recyclables in conformance with applicable land use permits, would not create any new land use compatibility impacts. **(Less Than Significant Impact)**

Impact LU – 7: The proposed project would not impact the future San Francisco Bay Trail alignment, San José Bay Trail, or City of Fremont planned bicycle paths; convert farmland to non-agricultural uses; conflict with existing zoning for agricultural use or a Williamson Act contract; or result in the conversion of farmland to non-agricultural use. The City shall review the landfill's existing litter control plan (see **AM LU – 7** below) and require additional measures to control litter (if necessary). **(Less Than Significant Impact)**

3.2 VISUAL AND AESTHETICS

3.2.1 Setting

3.2.1.1 *Project Site*

The project site consists of three main areas: 1) the main body of the landfill; 2) the visually distinctive D-shaped area (which is part of the NISL); and 3) the Recyclery, which contains the only permanent building on the site. While there are operational changes proposed in all three areas, the most substantial physical modification of the site would be the increased height. That would also be the most visible change.

Sanitary Landfill and the D-Shaped Area

Photographs of the project site were taken from surrounding vantage points where the landfill is or could be visible to the general public (see Figure 3.0-2) including Dixon Landing Road, Don Edwards San Francisco Bay National Wildlife Refuge, the residential neighborhood of Alviso at Spreckles Avenue, the end of the San Francisco Bay Trail in Fremont, and the Great Mall lightrail station in Milpitas. The photographs are reproduced in Figures 3.0-3 to 3.0-7. A description of the views provided in the photographs is provided below:

- Figure 3.0-3: View 1 – view of the project site from Dixon Landing Road in the City of Milpitas, from a location immediately adjacent to the residences nearest the project site, looking northwest;
- Figure 3.0-4: View 2 – view of the project site from a location immediately adjacent to the parking lot of the Alviso Visitors' Center in the Don Edwards National Wildlife Refuge, in the City of San José, looking northeast;
- Figure 3.0-5: View 3 – view of the project site from a point near the corner of Grand Boulevard and Spreckles Avenue immediately adjacent to the village of Alviso, looking northeast;
- Figure 3.0-6: View 4 – view of the project site from the existing southerly terminus of the San Francisco Bay Trail in the City of Fremont, near the intersection of Fremont Boulevard and Lakeshore Boulevard, looking southwest;
- Figure 3.0-7: View 5 – view of the project site from an elevated station platform at the Great Mall lightrail station in the City of Milpitas, looking northwest; and
- Figure 3.0-8: View 6 – view of project site from Camarillo Court in the City of Milpitas, looking west.

Selection of Viewpoints

The priority in selecting viewpoints for analysis of visual impacts was to identify locations from which the landfill is clearly visible to the public. Visual changes that are apparent to individuals are not necessarily CEQA impacts. A scenic vista or scenic resource is a view or resource that is visible to the general public or to a substantial portion of the community, such as a neighborhood.

Existing Views

The viewpoint in Figure 3.0-3 illustrates the appearance of the landfill from the closest edge of the closest existing residential area in Milpitas. From Dixon Landing Road, the landfill looks like a distant hill with a structure on its southern slope. Ground level activities on the D-shaped area and at

the Recyclery are not visible. Since the viewpoint is adjacent to the Interstate 880 (I-880), it also represents the view visible to northbound drivers on the freeway.

The Don Edwards San Francisco Bay National Wildlife Refuge is a major public open space feature that consists of a variety of wetlands and habitats. Public access in the Refuge is generally limited to trails and the visitors and educational centers. The ~~Alviso-Visitors~~ Don Edwards San Francisco Bay National Wildlife Refuge Environmental Education Center is the nearest visitor's center, located adjacent to the Wildlife Refuge and a little more than a mile from the southerly edge of the landfill. From the northerly edge of the center's parking lot, the landfill looks like a low hill with buildings on top. Without the buildings on top, the landfill would blend visually with the more distant hills behind it (Figure 3.0-4). The mass of the landfill from the closest point on the Lower Guadalupe River trail (as well as the proposed Gold Street Education Center proposed by the Santa Clara Valley Water District, SCH#2009032058) to the landfill, which would be at Gold Street, would be similar to what is shown in Figures 3.0-4 and 3.0-5. However, the view of the landfill from this trail would be obstructed more due to existing development located in the view corridor between the trail and the landfill.

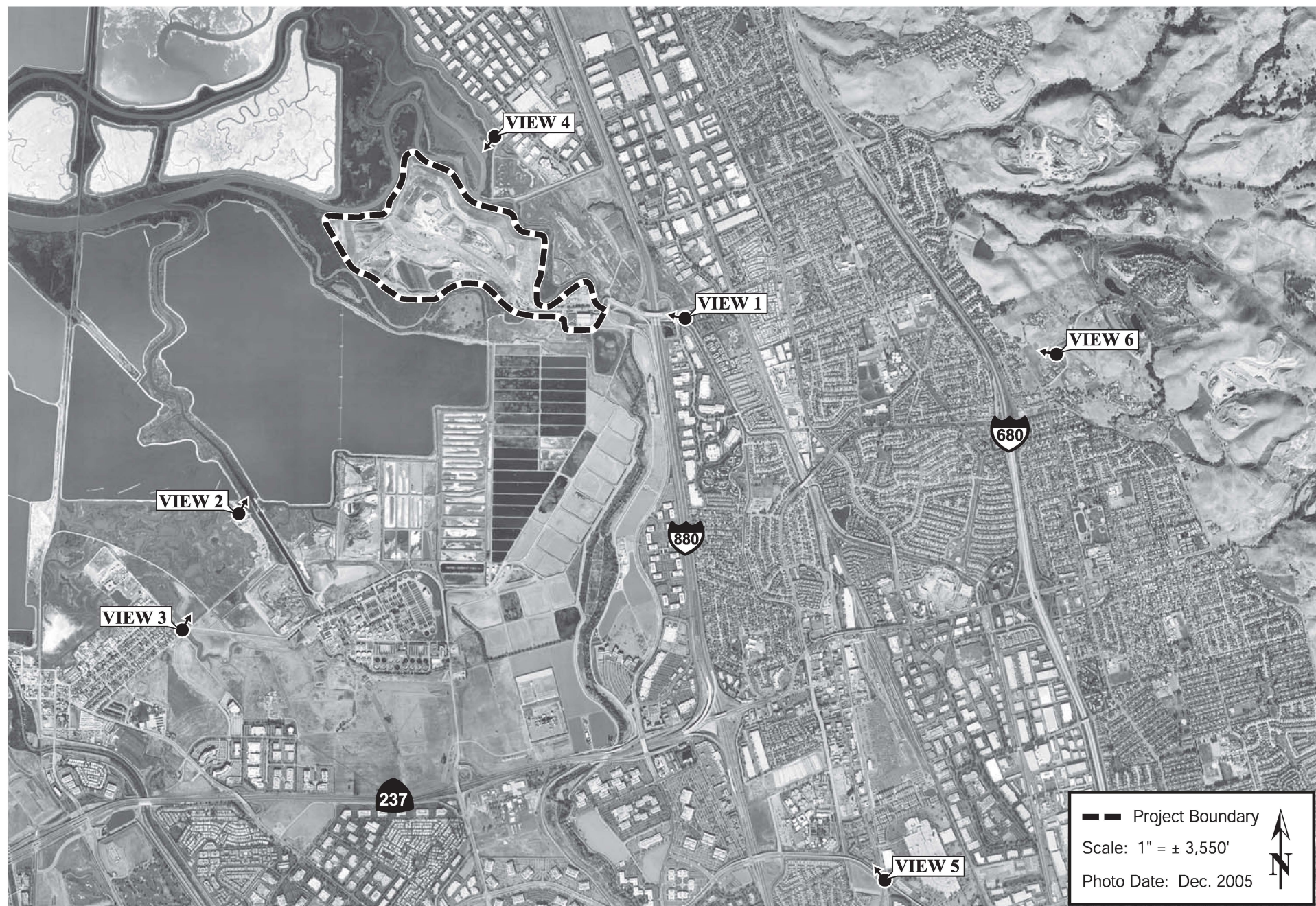
The Alviso area of San José includes a residential neighborhood southwest of Spreckles Avenue. Both the ~~Visitors~~ Education Center and Alviso itself are separated from Newby Island by the relatively flat wetlands and water, which allow for an uninterrupted view. Viewpoint 3.0-5 is located near the corner of Spreckles and Grand Boulevard and looks across the wetlands and salt pond A-18 to the NISL. This viewpoint represents the clearest view likely from this residential neighborhood, since the views from most of the neighborhood would be partially obscured by other houses and trees. Again, the landfill appears as a low hill that blends almost imperceptibly into the natural hills behind it.

From what is now the end of the San Francisco Bay Trail located north of Newby Island (Figure 3.0-6) the landfill is a wide, low mound, noticeable because it is located in an otherwise relatively flat landscape. This segment of the San Francisco Bay Trail does not yet connect physically to other segments in San José, but the Trail south of Dixon Landing Road is designated in the City of San José General Plan as a Scenic Trail.⁴¹ ABAG has future plans to connect this northerly segment to segments in Milpitas and San José, and to extend the San Francisco Bay Trail around the project site. The existing and future San Francisco Bay Trail paths are shown on Figure 3.0-1.

From the viewpoint of the Great Mall light rail station (Figure 3.0-7), the landfill is very hard to distinguish between other urban structures. City of Milpitas staff had also suggested showing a viewpoint from the edge of the foothills at approximately the same elevation as the top of landfill. This suggested viewpoint is shown in Figure 3.0-8 at the end of Camarillo Court in Milpitas.

In the field, the buildings and structures on the landfill were noticeable and distinguishable from viewpoints shown in Figures 3.0-3 to 3.0-8 due to their contrasting color and the fact that they break the surface line of the landfill mass. They may be less noticeable in the photographs because of the visual clutter introduced by other buildings in the foregrounds, large pieces of outdoor equipment, electrical transmission lines and towers, roadways, etc.

⁴¹ City of San José. General Plan, Scenic Routes and Trails Diagram. Map 16.



LOCATION OF VANTAGE POINTS

FIGURE 3.0-2

November 3, 2007

Existing

Viewpoint #1 - Dixon Landing & 880
distance: 6895 ft from center of landfill
direction: looking west
from azimuth: 77° E
37°27'19.56"N
121°55'9.06"W

Proposed

Proposed 245 ft MSL Plan

Viewpoint #1 - Dixon Landing & 880
distance: 6895 ft from center of landfill
direction: looking west
from azimuth: 77° E
37°27'19.56"N
121°55'9.06"W

Permitted

Permitted Height of 150 ft MSL

Viewpoint #1 - Dixon Landing & 880
distance: 6895 ft from center of landfill
direction: looking west
from azimuth: 77° E
37°27'19.56"N
121°55'9.06"W

VIEW OF LANDFILL FROM DIXON LANDING ROAD AND INTERSTATE 880 FIGURE 3.0-3

November 3, 2007

Existing

Viewpoint #2 - Edwards Wildlife Refuge
distance: 8815 ft from center of landfill
direction: looking northeast
from azimuth: 216° SW
37°26'25.85"N
121°57'37.41"W

Proposed

Proposed 245 ft MSL Plan

Viewpoint #2 - Edwards Wildlife Refuge
distance: 8815 ft from center of landfill
direction: looking northeast
from azimuth: 216° SW
37°26'25.85"N
121°57'37.41"W

Permitted

Permitted Height of 150 ft MSL

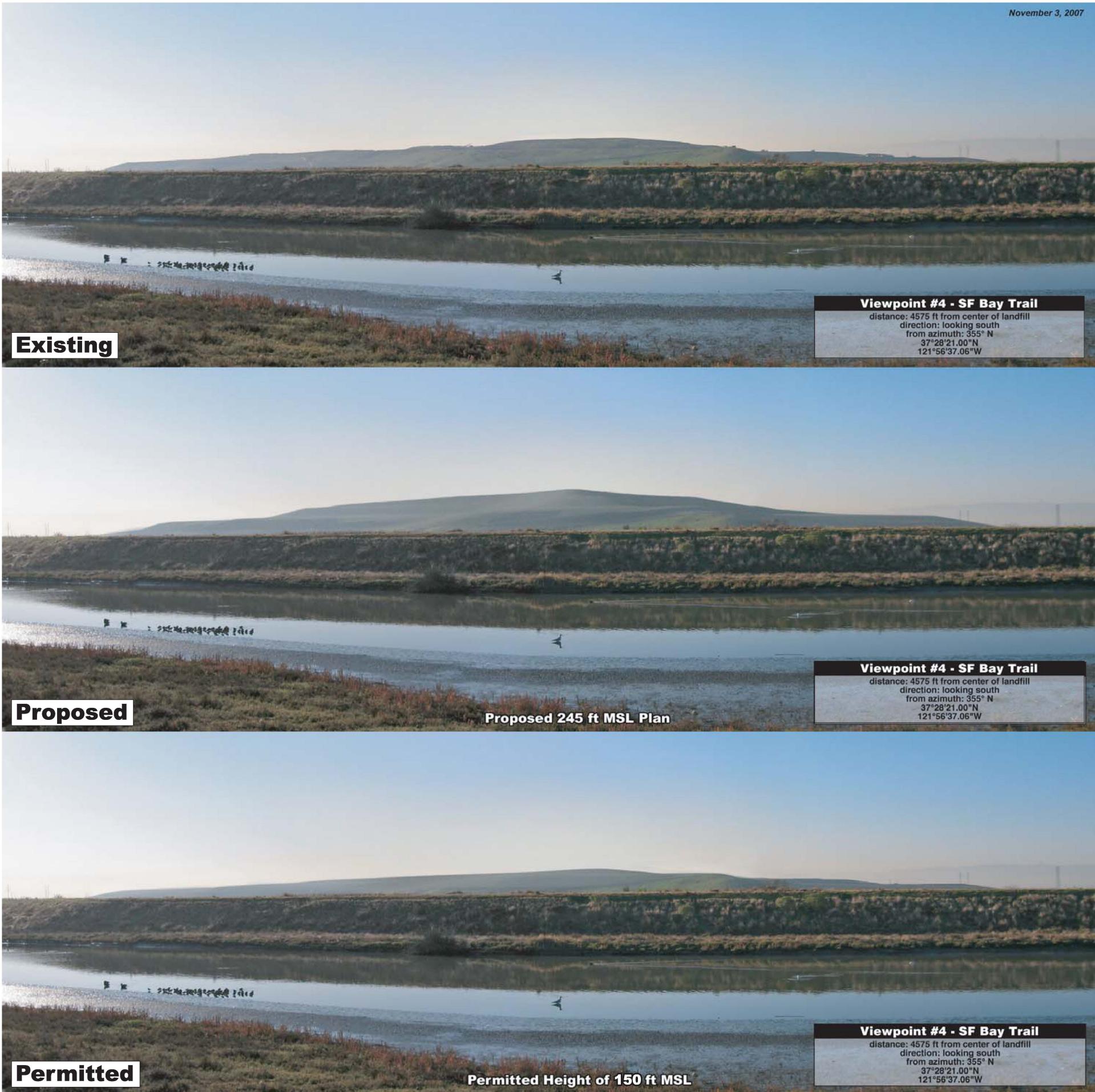
Viewpoint #2 - Edwards Wildlife Refuge
distance: 8815 ft from center of landfill
direction: looking northeast
from azimuth: 216° SW
37°26'25.85"N
121°57'37.41"W

VIEW OF LANDFILL FROM THE DON EDWARDS WILDLIFE REFUGE FIGURE 3.0-4



VIEW OF THE LANDFILL FROM SPRECKLES AVENUE IN ALVISO

FIGURE 3.0-5



VIEW OF LANDFILL FROM THE SAN FRANCISCO BAY TRAIL

FIGURE 3.0-6



VIEW OF LANDFILL FROM THE GREAT MALL LIGHTRAIL STATION

FIGURE 3.0-7



VIEW OF LANDFILL FROM CAMARILLO COURT

FIGURE 3.0-8

The Recyclery

The Recyclery site is developed with a two-story metal building. Two smaller single-story temporary buildings are located east of the main Recyclery building on a paved surface. A paved lot, equipment, and piles of organic wastes are located west of the main building. A water supply well and tank are located at the southwest corner of the Recyclery.

3.2.1.2 *Surrounding Area and Scenic Resources*

Newby Island is an island separated by a creek and slough from the solid ground around it. Across the creek north of the project site is a large wetland area, one to two-story office buildings and undeveloped open space to the northeast and east. Sludge ponds and the WPCP are located south of the project site. Dixon Landing Road (a two-lane east/west roadway), North McCarthy Boulevard (a four-lane north/south arterial), and I-880 (a four- to six-lane north/south freeway) are east of the site (see Figure 1.0-3).

According to the City's General Plan, the City of San José has many scenic resources including the broad sweep of the Santa Clara Valley, the hills and mountains which frame the Valley floor, the baylands, and the urban skyline itself (particularly high-rise development). The City has designated scenic routes and trails near the project site. I-880 is a designated urban throughway and there are designated trails and pathway corridors (including the Bay Trail, Lower Guadalupe River Trail) south of the project site which go along creeks and around the salt ponds.

3.2.2 Visual and Aesthetic Impacts

3.2.2.1 *Thresholds of Significance*

For the purposes of this project, a visual and aesthetic impact is considered significant if the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area.

3.2.2.2 *Discussion of Impacts*

The CEQA Guidelines advise that an impact analysis should “normally” examine “changes in the existing physical conditions in the affected area, as they exist at the time the Notice of Preparation is published (§ 15126.2).” CEQA case law, however, also recognizes that binding entitlements that allow changes in the physical environment to occur without further discretionary actions should also be taken into account in CEQA documents. The discussion below therefore identifies existing physical conditions on the project site and extrapolates both what the site will look like with completion of the existing landfill SWFP, and what it might look like if the currently proposed rezoning is approved.

According to the existing approved Preliminary Closure and Post-Closure Maintenance Plan (July 2006), the final use for most of the landfill will be a passive land use park. From surrounding land uses, the landfill at its end use will look like a large grass-covered hill. The proposed project would result in a taller grass-covered hill. A portion of the landfill site will be utilized for environmental control and monitoring facilities. The end use plan includes an education center, wildlife observation points, access roads and trails, and public facilities (which are not defined at this point in time), in addition to the gas recovery system and flare.

Change in Visual Character

The proposed physical changes to the project site are listed in Table 3.1-1. Aesthetic values are, by their nature, very subjective. Opinions as to what constitutes a degradation of visual character will differ among individuals. The assessment of a project's visual impacts is dependent on an evaluation of the character and design of the proposed change(s) and the degree to which those changes are or will be visually compatible with the surrounding area. The primary criteria that are considered in this assessment include: 1) the spatial relationship of the site to neighboring land uses; 2) the mass, scale, and height of the proposed project and its visibility from the surrounding area; and 3) whether the project is likely to result in visual impacts including glare, shadows, and night lighting, or obscuring a scenic vista for a segment of the public.

In general, the visual change most noticeable to surrounding land uses will be the proposed increase in maximum elevation from 150 to 245 feet (NGVD29). Currently, the existing landfill height, where the additional height is proposed, varies between 100 and 130 feet (NGVD29).⁴² Compared to the existing landfill height, the proposed project would allow for a height increase of 115 to 145 feet (NGVD29). Compared to the currently permitted maximum height, the proposed project would allow for a height increase of 95 feet (NGVD29).

Photosimulations of the landfill at its proposed height of 245 feet (NGVD29) and at its permitted height of 150 feet (NGVD29) were completed by *Previsualists, Inc.* The photosimulations are provided to compare to each other and to the existing views of the site in Figures 3.0-3 to 3.0-8. The first photograph in each figure is of the existing landfill. The second photograph is a photosimulation of the landfill at its proposed height of 245 feet (NGVD29) as viewed from the same vantage point and the third photograph in each figure is a photosimulation of the landfill at its currently permitted height of 150 feet (NGVD29).

While the proposed project would allow for the maximum landfill height to be 245 feet (NGVD29), the entire landfill area would not be filled to 245 feet (NGVD29). As shown on the conceptual site plan (Figure 1.0-10), the landfill would slope up with the center of the landfill peaking at 245 feet (NGVD29). Landfill grading is designed to maximize slope stability and allow for maintenance in the future. The landfill therefore “steps” up in elevation with flat benches that slope gently to drain. Both the existing and proposed grading follow that plan. The photosimulation was based on the proposed grading, including the benches.

As shown in Figures 3.0-3 to 3.0-7, the existing, permitted, and proposed landfill heights from the surrounding vantage points appear similar to each other. While the landfill at its proposed height has greater mass and height than the landfill at both its existing height and existing permitted height, the overall size of the landfill (width and mass) is so great that the increment of difference appears relatively small. While the increase in landfill height covers some additional sky and more of the

⁴² Since this is within an active landfilling area, the elevation changes continuously.

hillsides in the background from certain vantage points, the change in visual character of the area is not substantially degraded by this change. In Figures 3.0-3 and 3.0-6 through 3.0-8, the landfill appears against a neutral background (the sky) which is itself a much vaster scale than the change in landfill height. Additionally, Figure 3.0-6 is viewed from the north side of the landfill which (except for final cover) is already filled to its permitted height.⁴³ In Figures 3.0-4 and 3.0-5, the change in landfill height appears against the base of an existing hillside. The increase in landfill height does not substantially block views of the hills. Since the landfill will be mostly grass-covered in its final state, the landfill appears to be part of the natural landscape along with the hills.

The project proposes to increase the maximum permitted height of the landfill, while decreasing the area that can be landfilled. As part of the project, the D-shaped area would not be filled. Since the footprint of the landfill is not expanding, it would not place the landfill closer to surrounding residential uses or sensitive receptors. In addition, there is no proposal to place recycling activities on the parts of the landfill that are visible off-site. Any future proposal to do so would require rezoning of the site and subsequent CEQA review.

As shown on Figure 1.0-10, there would be a bench about halfway up the landfill at 110 to 130 feet. The project proposes to have hauling company facilities including box storage; landfill facilities including recyclable materials processing and equipment storage; and composting operations and facilities including windrows, material processing, finished compost stockpiles, and equipment storage. Currently, no landfill equipment, operations, or buildings are visually distinguishable on landfill (except for low-lying structures at the top of the landfill) (see Figures 3.0-3 to 3.0-8). It is not anticipated that the activities such as windrows and compost stockpiles at the midway bench on the landfill would be visually distinguishable. However, it is possible that other proposed activities on this midway bench such as box storage and equipment storage would be visible. To minimize the visual impact of activities on the midway bench, the project proposes to create a berm at the edge of the bench to block views of the activities at the midway bench. For this reason, the proposed activities at the midway bench would not degrade the visual character of the site.

While the mass and height of the landfill would increase under the proposed project (compared to the existing height), the increase will not substantially alter or degrade views of, from, or within the project area (refer to Figures 3.0-3 to 3.0-7). In addition, as concluded in the previously certified EIR for the General Plan Amendment and PD Rezoning of the D-shaped area (File No. GP01-04-03, GP01-T-37, and PDC01-03-045), the development of a corporation yard on the D-shaped area would result in less than significant visual and aesthetic impacts. [That rezoning (PDC01-03-045) is inactive but would be in conflict with this proposed project.] The project also proposes to create a berm along the edge of the midway bench to shield and block views of activities from surrounding areas. For these reasons, the proposed project would not substantially degrade the existing visual character or quality of the project site and its surroundings. A discussion of light and glare impacts is provided below.

Impact AES – 1: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. **(Less Than Significant Impact)**

⁴³ Note that in Figure 3.0-6, the landfill appears taller under existing conditions than permitted conditions due to temporary stockpiles and a screening berm that were present when the existing photograph was taken. The stockpiles and screening berm would not be present after the landfill closes; therefore, the landfill looks shorter under permitted conditions in Figure 3.0-6.

Impacts to Visual Resources and Scenic View Corridors

Viewpoint #1 in Figure 3.0-3 is the closest point of the nearest residential land use which is in Milpitas. This viewpoint is similar to what would be seen from I-880, a designated thoroughway in the City of San José's General Plan. While slightly more landfill mound could be seen in the proposed project condition (compared to existing or permitted conditions), the proposed height increase would not be visually intrusive, would not be a change in visual character, and would not obscure any scenic vista.

The views from the wildlife refuge visitors' center (Figure 3.0-4) and the village of Alviso (Figure 2.0-5) illustrate that the height increase would obscure a slightly greater amount of the hillside behind the landfill, compared to both existing and proposed conditions. Since the hill would continue to be visible and actually dwarfs the landfill, the change is neither a significant degradation of the visual character nor a loss of a scenic view from either vantage point.

The San Francisco Bay Trail segment south of the project site is part of a City of San José designated scenic trail system. A map of the existing San Francisco Bay Trail is provided in Figure 3.0-1. The northern extension of the San Francisco Bay Trail is located approximately 0.23 miles northeast of the site. The southern extension of the San Francisco Bay Trail is located approximately 0.4 miles southeast of the landfill. As shown in Figure 3.0-6, the change introduced by the proposed height increase as seen from the existing San Francisco Bay Trail at its closest point to the landfill appears minor compared to existing and permitted conditions, the latter two being visually identical from this viewpoint.

ABAG has future plans to extend the San Francisco Bay Trail around the perimeter of the landfill on top of the levee (see Figure 3.0-1). The proposed project would not be increasing the existing footprint of the landfill. Since the trail does not exist at that location, the increment of change cannot be measured from any point on that trail segment. The proposed height will appear taller to users of the trail than would the currently permitted height, but no scenic vistas would be impacted since trail users on the levee would not be able to see over the landfill in either circumstance.

The project would not result in impacts to scenic resources such as trees, rock outcroppings, or historic buildings. As shown in the photosimulations and described above, the proposed project would not result in significant impacts to visual resources or scenic views (*e.g.*, views from I-880, the San Francisco Bay Trail, or Refuge).

The proposed project would rezone the D-shaped area in accordance with its General Plan designation. The proposed zoning for both the D-shaped area and the Recyclery would allow a variety of light industrial activities, including vehicle and equipment storage and maintenance, material storage and processing, bin repair and painting, and similar uses (see Table 1.4-1). These uses can continue in perpetuity so they would continue in place after the Bay Trail is extended onto the NISL site.

Development of the D-shaped area and future uses of the Recyclery site (including permits for existing uses), would be subject to the City's Industrial Design Guidelines, as well as mitigations identified in this EIR. The San Francisco Bay Trail is not a use considered inconsistent with industrial development, since it is planned and located adjacent to industrial development elsewhere in the Bay Area. Development of the proposed uses on the D-shaped area and the Recyclery site in accordance with the City's Industrial Design Guidelines and Riparian Corridor Policy (to the extent

applicable) would not create a new significant aesthetic impact, and would not be incompatible with the future planned San Francisco Bay Trail.

Impact AES – 2: The proposed project would not result in significant new impacts to visual resources or scenic views (including views from I-880, the San Francisco Bay Trail, and Refuge). **(Less Than Significant Impact)**

Light and Glare Impacts

Currently, mobile floodlights illuminate the active landfill area during night operations. The scale houses, scale area, and the landfill haul route used are lighted during the night to allow for safe travel and operation. All landfill equipment used during night operations are equipped with lights. Also, mobile lighting is used for other on-site activities occurring during night hours.

Operations occurring inside the Recyclery building are illuminated by the building lights. Operations occurring outside on the Recyclery have lights to facilitate safe operation, and all mobile equipment has light suitable for operating outside.

No changes to lighting are proposed and no new lighting is proposed on the NISL.⁴⁴ For these reasons, the proposed project would not result in significant new light or glare impacts. As the height of the landfill increases, the lighting associated with nighttime operations will be incrementally more visible. The location of a corporation yard on the D-shaped parcel would likely require some additional nighttime lighting for safety purposes, and when equipment or vehicles are being serviced between the daytime shifts. This is not a change from existing conditions (since most of the corporation yard operations are already on the site) but would be different compared to circumstances if the operations are not allowed on site (see **Section 8.0**, the No Project Alternative). In addition, landfill lighting is, and would be under the proposed project, shielded and directed downward during night operations. Lighting attached to a permanent vehicle maintenance building would be subject to City permits, the City's Outdoor Lighting Policy, and Design Guidelines.

The City's Outdoor Lighting Policy requires the use of low-pressure sodium lighting for outdoor unroofed areas. The City's Outdoor Lighting Policy also requires that no light source be directed skyward; all light sources that produce more than 4,050 lumens be fully shielded to prevent light aimed skyward; all light sources that produce less than 4,050 lumens be at least partially shielded; and all outdoor lighting fixtures be turned off within one hour of the close of business, unless needed for safety or security, in which case the lighting shall be reduced to the minimum level necessary.

The City's Riparian Corridor Policy Study design guidelines require that lighting for the landfill must be sited and designed to avoid light and glare impacts to the riparian corridor. Any lighting on the site must be kept as far as possible away from the riparian corridor and must be as low as possible and directed downward, with the light source not visible from the riparian areas.

Lighting impacts to biological resources are discussed in **Section 3.6**.

Impact AES – 3: The proposed project would not result in significant new light or glare impacts. **(Less Than Significant Impact)**

⁴⁴ Doss, Steve. Email from Allied Waste. "Re: Newby – light sources & geotech report." 9 October 2007.

3.2.3 Mitigation and Avoidance Measures

No mitigation or avoidance measures are required.

3.2.4 Conclusion

Impact AES – 1: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. **(Less Than Significant Impact)**

Impact AES – 2: The proposed project would not result in significant new impacts to visual resources or scenic views (including views from I-880, the San Francisco Bay Trail, and Refuge). **(Less Than Significant Impact)**

Impact AES – 3: The proposed project would not result in significant new light or glare impacts. **(Less Than Significant Impact)**

3.3 TRANSPORTATION

The following discussion is based in part on a traffic study completed by *Hexagon Transportation Consultants, Inc.* in June 2008. A copy of this study is included in Appendix B of this EIR.

3.3.1 Setting

3.3.1.1 *Existing Transportation Network*

Roadway Network

Regional access to the project site is provided via Interstate 880 (I-880), a north/south freeway providing regional access from east bay cities to Milpitas and San José, where it becomes SR 17. Within the City of Milpitas, I-880 is a six-to eight-lane freeway.

Local access to the site is provided by Dixon Landing Road, an east-west major arterial in Milpitas. A full interchange connects to I-880. In the vicinity of the project site, Dixon Landing Road is a divided four-lane roadway that expands to eight lanes for the interchange with I-880. Dixon Landing provides direct access to the project site via a driveway and bridge at the western terminus of Dixon Landing Road and its intersection with McCarthy Boulevard. An all weather access road extends approximately 2,500 feet from the Dixon Landing Road/McCarthy Ranch Road intersection to the gatehouse and scale. A gate at the intersection precludes access when the landfill and Recyclery are closed. There are no sidewalks or bicycle lanes on the bridge.

Pedestrian and Bicycle Facilities

A system of trails and pathways in the north San José/Milpitas/Fremont area provides recreational opportunities for pedestrians, joggers, hikers, and bicyclists. Besides the recreational benefits, these facilities offer users an alternative means of transportation to and from work, school, and other designations. The area includes existing and planned segments of ABAG's San Francisco Bay Trail. Segments of the San Francisco Bay Trail currently exist along Coyote Creek and Fremont Boulevard in the site vicinity. The San Francisco Bay Trail is planned to connect these two segments and continue around the perimeter of the landfill (see Figure 3.0-1).⁴⁵ The San José's Bay Trail Master Plan provides for a trail plan for the San José segment of the San Francisco Bay Trail project. The nearest San José Bay Trail reach to the project site is located south of Dixon Landing Road and McCarthy Boulevard intersection on the west side of Coyote Creek (refer to Figure 3.0-1).

Other existing trails in the project site vicinity include the Lower Guadalupe River Trail, Santa Clara County Juan Bautista de Anza National Historic Trail, Coyote Creek Trail, and Calaveras Trail. Refer to Figure 3.0-1 for a map of existing and planned bikeways and trails near the project site.

Existing bike lanes in the project area include bike lanes on McCarthy Boulevard and California Circle southeast of the project site. A bike lane is a striped lane for one-way bicycle travel on a roadway. Bicycles are also allowed on Dixon Landing Road. There is not a designated bike lane on Dixon Landing Road, rather bicyclists share the roadway with motor vehicles. According to the City of Fremont Bikeway Map, a trail head is located at Dixon Landing Road and the landfill. According to the Fremont Bicycle Master Plan (adopted 2005), future bicycle trails and lanes are identified on

⁴⁵ The segment of the San Francisco Bay Trail that is planned around the perimeter of the landfill is part of ABAG's adopted San Francisco Bay Trail Plan.

Fremont Boulevard and between Fremont Boulevard and the project site. In addition, the SR 237 bikeway (while it does not provide access to the site) is located in the vicinity, approximately three miles southeast of the project site.

Intersection Level of Service Methodology

Existing traffic conditions at nearby offsite study intersections were evaluated using level of service (LOS). Level of Service is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, as the best operating conditions, to LOS F, the worst operating conditions. Because of the restricted access to the site, all incoming traffic reaches the site from I-880 and Dixon Landing Road, which are located within the City of Milpitas.

The City of Milpitas uses the 2000 Highway Capacity Manual (HCM) method to analyze intersection levels of service, and evaluates intersection operations on the basis of average delay for all vehicles at the intersection. This average delay can then be correlated to a level of service as shown in Table 3.3-1 for signalized intersections.

Table 3.3-1: Signalized Intersection Level of Service Definitions		
Level of Service	Description of Operations	Average Control Delay* (seconds/vehicle)
A	Insignificant Delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	Minimal Delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 to 20
C	Acceptable Delays: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 to 35
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 to 55
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80
Note: * Average Control Delay includes the time for initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Source: Highway Capacity Manual, Transportation Research Board, 2000.		

Study Intersections

The project traffic analysis evaluated the peak-hour levels of service for the following two study intersections, which are within the City of Milpitas:

- I-880 southbound ramps and Dixon Landing Road
- I-880 northbound ramps and Dixon Landing Road

Traffic conditions at the study intersections (see Figure 3.0-9) were analyzed for the weekday AM and PM peak hours of traffic. The AM peak hour of traffic is generally between 7:00 AM and 9:00 PM, and the PM peak hour is typically between 4:00 PM and 6:00 PM. It is during these periods that the most congested traffic conditions occur on an average day. Traffic conditions for the following scenarios:

Existing Conditions – Existing traffic volumes obtained from recent traffic counts.

Background Conditions – Background traffic volumes were estimated by adding existing peak-hour volumes and the projected volumes of approved but not yet constructed developments. The latter components are contained in the City of Milpitas Approved Trips Inventory (ATI).

3.3.1.2 Existing Conditions

Existing Intersection Level of Service

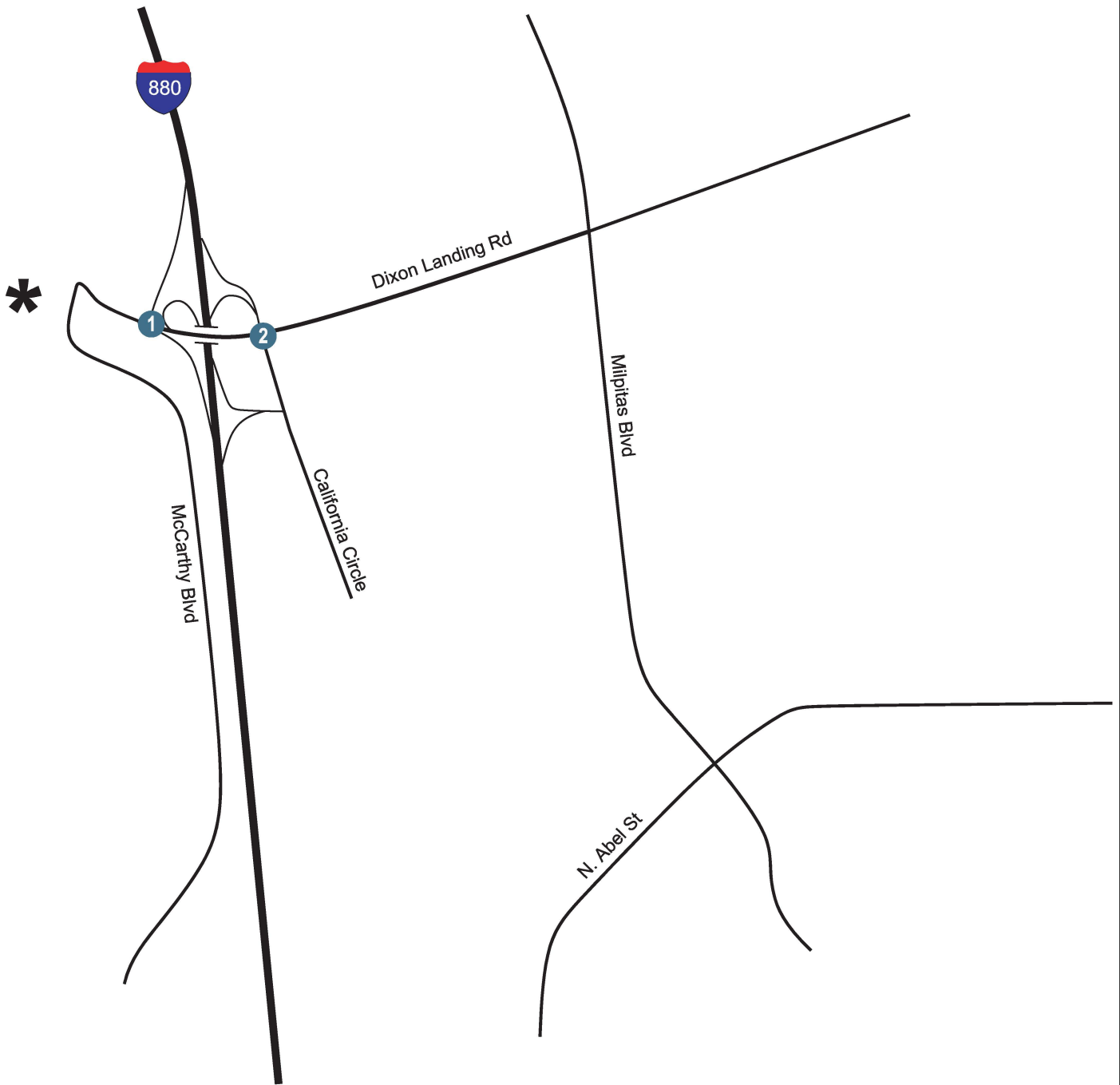
The level of service results for the signalized intersections under existing conditions are summarized in Table 3.3-2 below. The results show that the study intersections currently operate at an acceptable LOS C or better during the AM and PM peak hours.

Table 3.3-2: Intersection Levels of Service Under Existing and Background Conditions					
Intersection	Peak Hour	Existing Conditions		Background/Project Conditions	
		Average Delay	LOS	Average Delay	LOS
I-880 SB ramps and Dixon Landing Road	AM	10.1	B	10.7	B
	PM	9.0	A	8.8	A
I-880 NB ramps and Dixon Landing Road	AM	18.2	B	18.5	B
	PM	24.1	C	24.8	C



Existing Traffic Volumes

As discussed in **Section 1.0 Description of the Proposed Project** of this EIR, existing conditions at an operating solid waste and recycling facility cannot be characterized by looking at operations on a single day, or even a single month. The permitted capacity for NISL is much greater than recent operations, and changes in the local communities and regulatory system have resulted in substantial changes in the way the facilities operate and the types and quantities of materials that are received at the site, and these same ongoing circumstances are likely to result in other changes in the future.

The CEQA Guidelines advise that the “existing conditions” that form the baseline for evaluating the significance of impacts should generally be based on the physical conditions that exist at the time a Notice of Preparation (NOP) is issued. However, to pick that day or even that month would not give a real or accurate snapshot of facility operations at Newby Island. The NOP for this EIR was issued in December 2007. Winter is not usually a high or even average waste generation period (except of course for the holiday season). Since fall, after children are in school, is more typical, the months of October for the two years preceding the NOP were evaluated here.



LEGEND

-  = Site
-  = Study Intersection

Source: Hexagon Transportation Consultants, Inc.

EXISTING ROADWAY NETWORK AND STUDY INTERSECTIONS **FIGURE 3.0-9**

To characterize traffic at the site, Table 1.4-2 summarizes operations trips to the site during October 2006 and 2007. The site-generated trips are identified for high and low days, averages and totals. It needs to be kept in mind that these vehicles are not all delivering waste to the landfill, many are delivering recyclables (construction and demolition debris, green waste, etc.) to recycling operations that operate on the landfill and to the landfill operators who use soil and other materials on-site.

As an independent confirmation, traffic counts were made in November 2007 (refer to Appendix B). A summary of the results is provided in Table 3.3-3. The existing traffic volumes using the Dixon Landing Road driveway on and off of Newby Island were counted over a one week period. Based on the data, the weekdays are the busiest days, with Fridays being the busiest. On the surveyed Friday, a total of 2,423 trips were made entering and leaving the site.

Table 3.3-3: Summary of Existing Traffic Volumes in November 2007			
Day	Total # of Vehicles (in/out)	# of Trucks to the Landfill	# of Trucks to the Recyclery
Saturday	338/378	133	24
Sunday	52/46	0	0
Monday	1,167/1,191	543	141
Tuesday	1,199/1,218	547	131
Wednesday	1,187/1,214	523	155
Thursday	1,109/1,054	463	143
Friday	1,192/1,231	479	153
Note: Counts of total vehicles prepared by Hexagon Transportation Consultants. Number of trucks to landfill and Recyclery provided by Allied Waste.			

The peak hours do not conform to the normal AM and PM commute hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The busiest peak hour was at noon on Friday when there were 254 vehicles on Dixon Landing Road, with 125 vehicles entering the site and 129 vehicles leaving the site. As discussed below, many of the employees leave the site for lunch.

Much of the traffic to the project site is associated with activities other than landfilled waste, including delivery of soil and C&D debris, delivery of source separated recycled materials, and off-hauling compost and other recycled materials.

Reconciling the Numbers

These various traffic numbers that are provided are different and were provided for different purposes. The numbers in Table 1.4-2 are the totals for vehicles delivering material to the site. Unlike the counts done by the consulting traffic engineer (Total # of Vehicles column in Table 3.3-3), these counts only identify a single “trip” – the trip to Newby Island, and the numbers do not include any other type of vehicle (other than haul vehicles). Some of those haul vehicle trips will not leave the landfill on the same day they arrive (*i.e.*, Allied collection vehicles that remain at the site overnight). Some vehicles may not leave for several days.

The Total # of Vehicles column in Table 3.3-3, however, includes not only vehicles delivering waste and recyclables, it also includes employees and visitors, and it counts all incoming vehicle movements as a single movement each time the vehicle enters the site – no matter how many times the same vehicle goes in or out of the gate.

The numbers in Table 1.4-2 were all provided by Allied Waste based on their records. The numbers in the Total # of Vehicles column in Table 3.3-3 were generated by the consulting traffic engineer retained by the EIR consultant. If the numbers are segregated into similar categories for comparison purposes – they should be similar enough to be credible. Because the counts made in October 2006 and 2007 were based only on scale tickets, there is no record of trips unrelated to hauling materials. The number of employee and visitors trips is unknown.

	11/2007 Counts	10/2006 counts*	10/2007 counts*
Total incoming vehicle trips (peak day)	1,199	N/A	N/A
Total incoming trips to landfill	547	341-1,269	142-927
Total incoming trips to Recyclery	197	52-277	14-247

Note: * October 2006 and 2007 counts represent the low and high number of trucks (see Table 1.4-2).

Based on their records for the day the total vehicle counts were made, Allied found that of the total 1,199 incoming trips on this day, 744 were recorded as crossing the scales, meaning they were hauling materials to or from either the landfill or the Recyclery. Some of the Recyclery traffic may have been vehicles that arrived empty and left loaded with recyclables. Of the remaining trips, 251 were identified as employees on the site, approximately 70 were identified as employees of other companies doing business on the landfill property (such as GRS and Allied's security firm), employees of the City's WPCP using the back gate adjacent to Newby Island, and miscellaneous visitors and deliveries to the site. Many of the on-site employees leave the island for lunch and then return (approximately 100 trips). The final categories include operations managers and route supervisors leaving for meetings or inspections and a small number of cars (four) that entered the driveway by accident, made a U-turn, and left.

The number of vehicle trips recorded as being directly related to the landfill or Recyclery operations on the peak day of the week counted in November 2007 falls well within the parameters of the high and low days for both October counts (2006 and 2007) for both facilities. While it would be possible to establish a "permitted" limit of vehicles that might be associated with the current permitted capacity of the landfill by identifying a ratio of vehicles to waste landfilled on the days the counts were made, the number would be misleading since substantial activity at Newby Island is related to recycling operations.

Conclusion: Given the range of traffic that is generated by Newby Island and the daily and seasonal variations, the baseline for this EIR cannot accurately be characterized as conditions on a single day (see discussion at the beginning of **Section 3.0**). For the purposes of this EIR, the traffic associated with existing operations at the Newby Island site is acknowledged to be a range that encompasses the vehicle counts for October 2006, October 2007, and November 2007.

3.3.1.3 *Background Conditions*

It is assumed in this analysis that the roadway network under background conditions would be the same as the existing roadway network. However, note that there is a long-range plan to extend Fremont Boulevard to McCarthy Boulevard at Dixon Landing Road. This would traverse what is currently undeveloped land. Any development of that property would have to be studied for the effect of its traffic on the surrounding roadway network. Traffic from that development would influence the operation of the McCarthy Boulevard and Dixon Landing Road intersection. There is currently a project (Creekside Landing Shopping Center) pending in the City of Fremont that includes the extension of Fremont Boulevard to Dixon Landing Road. However, this project is pending and has not been approved. Therefore, the project (including roadway improvements associated with it) is not included in the background conditions.

Without the connection of Fremont Road to McCarthy Boulevard, development projects in Fremont would not have any impact on the McCarthy Boulevard and Dixon Landing Road intersection. Since this improvement is not likely to occur in the near-term and it is unknown exactly when or if it will be implemented, it is not considered in the background conditions. However, the Creekside Landing Shopping Center project is included in the cumulative discussion (see **Section 6.0 Cumulative Impacts**).

Background peak-hour traffic volumes were calculated by adding the existing volumes to the estimated traffic from approved but not yet constructed developments, including those in the City of Milpitas (refer to Appendix B for more detail).

In May 2002, the City of San José certified a Final EIR for the purpose of amending the General Plan and rezoning the D-shaped area to allow a waste hauler's corporation yard to locate there. As stated previously, the General Plan was changed but the rezoning was not approved. The interchange at Dixon Landing Road, I-880, and McCarthy Boulevard was scheduled for improvements but they had not been completed at that time. The Final EIR found that the then-proposed corporation yard would add about 30 trips to each peak hour (primarily from employees that would be based at the site). The impacts were found to be less than significant at that time, and it was noted that future improvements would result in better LOS conditions than those then existing.

The operations that were anticipated in 2002 to be included in the waste hauler's corporation yard currently exist at Newby Island. That current traffic is therefore included in the existing conditions. Since existing traffic conditions at the interchange intersections are at satisfactory levels, the corporation yard traffic is not causing a significant adverse impact.

3.3.2 Transportation Impacts

3.3.2.1 *Thresholds of Significance*

For the purposes of this project, a transportation impact is considered significant if the project would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (*i.e.*, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways;

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (*e.g.*, bus turnouts, trails, bicycle racks).

3.3.2.2 *Discussion of Impacts*

The project proposes to rezone the project site to recognize the existing landfill operations, increase the maximum permitted elevation of the landfill from 150 feet to 245 feet (which would increase the capacity of the landfill by approximately 15.12 million cubic yards), and modify the zoning for the Recyclery. The proposal does not include an increase in the footprint of the landfill, and proposes no changes in the operating permits for either the landfill or the Recyclery. In fact, the project would slightly decrease the footprint of the landfill by not landfilling on the D-shaped area, which is currently allowed by existing SWFP. The proposed project would not impact the City's access to the WPCP from Dixon Landing Road.

While the CEQA Guidelines advise that the existing setting in an EIR should be the physical environmental conditions in existence at the time the Notice of Preparation (NOP) is published, it is also stated that the setting will “normally” constitute the baseline physical conditions for the purpose of determining whether an impact is significant.⁴⁶ The caveat implicit in the use of the word “normally” results in part from unusual circumstances associated with entitlements or other conditions that a lead agency determines should be taken into consideration when evaluating the context of likely impacts.

The existing landfill and recycling facilities at Newby Island have permits and will continue to operate, whether or not the proposed project is approved. Since the NOP was circulated on December 6, 2007, substantial quantities of waste and recyclables have been landfilled and processed. The site is no longer the same as it was on that day.

Under existing entitlements, the levels of traffic experienced in the recent past could continue. Even if waste hauled to the site is reduced, the amount of recyclables (especially construction and demolition debris and bulky items such as carpet and wood waste) processed on the NISL could and likely would increase incrementally.

As reflected in the vehicle counts made in the recent past and described in the Project Description §1.4.2.1 and 1.4.2.2, the quantity of traffic is highly variable and is not only driven by the quantity of waste hauled to the landfill. While the landfill is permitted to accept an average of 3,260 tpd and a daily maximum of 4,000 tpd, it has not received such quantities in recent years (see Table 1.4-3). Daily traffic varies a great deal, both on a daily basis and seasonally. Much of the traffic to the facility is associated with activities other than landfilled waste, including delivery of soil and construction/demolition debris, delivery of source separated recycled materials, and off-hauling compost and other recycled materials.

⁴⁶ Guidelines §15125(a).

Although the site is permitted to accept waste quantities that would generate substantially greater traffic than current conditions, and the project applicant is not proposing to change those permits, Allied Waste is proposing to limit traffic volumes to those experienced in October 2006. It is believed that those numbers allow sufficient flexibility to accommodate the decline in disposed waste and increases in recycling that current trends indicate are likely to occur in the next two decades. Although it is not possible to accurately predict exactly what those changes will be, impacts are likely to fall within these parameters. The SWFP would state the proposed traffic limit.

Intersection Levels of Service Impacts

While the proposed project would increase the capacity of the landfill, the project would not increase traffic volumes over existing conditions. As stated in **Section 1.0 Description of the Proposed Project**, the project applicant is proposing to limit incoming traffic delivering material for disposal or recycling to those volumes experienced in October 2006. Secondary traffic to the site (traffic that is not hauling or off-hauling materials) is entirely a function of the primary land uses (employees, maintenance subcontractors, regulatory personnel, etc.). No significant increase in traffic is likely to occur if the primary land uses (landfilling and recycling) do not increase. Without a substantial increase in traffic, the intersections at the Dixon Landing Road and I-880 interchange would not be significantly impacted by traffic associated with the proposed landfill height expansion.

As discussed under background conditions (above), the traffic from the corporation yard which is operating on the D-shaped area and the Recyclery site and is proposed to remain on the property, is also not causing a significant impact on intersections levels of service.

Since the project is proposing to limit incoming traffic volumes delivering materials for disposal and recycling to existing levels, the near-term traffic volumes and levels of services under project conditions would be the same as under background conditions (see Table 3.3-2). As shown in Table 3.3-2, the study intersections would operate at acceptable levels of service under the background/project conditions.

NISL is permitted to operate 24 hours a day. According to the landfill operator, this allows flexibility for the landfill operator to adjust receiving hours as needed, based on demand.⁴⁷ Currently, the operation hours for the landfill and Recyclery are 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday. Presently, the landfill operator does not foresee demand changing significantly in a manner that would suggest any change to operating hours.⁴⁸ However, if the landfill's and Recyclery's hours are shortened, the number of haul vehicles going to the landfill would have a shorter timeframe to get to the landfill. Therefore, if the landfill's and Recyclery's hours of operation were shortened, more haul vehicle trips could occur during a peak hour than under current conditions and this could result in a significant level of service impact.

A PD Permit will be required if the landfill operator wishes to shorten the existing operating hours, which are 3:00 AM to 5:00 PM Monday through Friday and 4:00 AM to 4:00 PM on Saturday. As part of the PD Permit, the landfill operator shall complete a traffic study that analyzes how the reduced operating hours would impact intersection levels of service. This study shall be submitted and reviewed by the City of San José. If traffic impacts are identified, the City of San José will require that the landfill operator shall set the hours in such a way as to avoid peak hour impacts.

⁴⁷ Gambelin, Donald. Email from Allied Waste. "Re: Newby – hours of operation." 20 May 2009.

⁴⁸ Ibid.

In addition, the LEA is responsible for enforcing traffic control at the landfill in conformance with state standards for traffic control at solid waste facilities (CCR Title 27, Section 20860), which states that landfill traffic shall be controlled to minimize interference and safety problems with traffic on adjacent public streets or roads. For these reasons, if the project operation hours are shortened, the project would not result in significant intersection level of service impacts.

Impact TRAN – 1: If the existing operating hours for the landfill and Recyclery are maintained, the proposed project would not result in significant intersection level of service impacts. If the landfill's and/or Recyclery's hours of operation were to be shortened, a PD Permit and a traffic study shall be required and significant intersection level of service impacts shall be avoided. For these reasons, the project would not result in significant level of service impacts.
(Less Than Significant Impact)

Impacts to Nearby Airports

The Norman Y. Mineta San José International Airport is located over five miles south of the landfill and Moffett Field is located about six miles southwest of the landfill. The Reid Hillview Airport is located about 10 miles southeast of the landfill. Under the proposed project, the maximum landfill height would be 245 feet (NGVD29). As discussed in **Section 3.1 Land Use**, any construction or alteration of more than 200 feet in height above the ground level is a concern to the Federal Aviation Administration (FAA) because of possible interference with aircraft. According to the FAA Advisory Circular 150/5200-33B, Section 4-2(a), the Environmental Protection Agency (EPA) requires owners or operators of existing landfills that are proposed for lateral expansions that are located within 10,000 feet (or about two miles) of any airport runway end used by turbojet aircraft or within 5,000 feet (or about one mile) of any airport runway end used only by piston-type aircraft, to demonstrate successfully that the proposed landfill height would not be a hazard to aircraft. The project applicant has filed a Notice of Proposed Construction or Alteration with the FAA and is waiting for a determination of "No Hazard" from the FAA. Given the landfill's location and distance from the nearby airports, it is not anticipated that the proposed height expansion of the landfill would cause safety hazards to aircraft or result in a change in air traffic patterns.

Impact TRAN – 2: The proposed project would not result in a change of air traffic patterns.
(Less Than Significant Impact)

Impacts to Pedestrian and Bicycle Facilities

The project proposes to increase the permitted height of the existing landfill. The project does not propose to increase the lateral extent/footprint of the landfill compared to both permitted and existing conditions. The lateral footprint of the landfill would actually decrease with the proposed project because landfilling would no longer be allowed on the D-shaped area (where landfill occurred in the past). No increase in traffic entering and leaving the site is proposed compared to the existing conditions. There would be no impact to existing pedestrian and bicycle facilities, and no impediment would be created to the future construction of planned facilities, including the Bay Trail.

It is unlikely that the San Francisco Bay Trail segment on Newby Island would be constructed prior to closure of the landfill, and there is no proposal to change the anticipated closure date. The San Francisco Bay Trail segment planned around the perimeter of Newby Island Landfill is located on land owned by the applicant and the San Francisco Bay Trail would not likely be constructed prior to closure of the landfill and installation of final cover, due to safety and security concerns about

conflicts between ~~with~~ ongoing landfill operations and trail users. As discussed previously, the City of San José has no direct control over the closure date of the landfill and it is possible that the landfill could close at a later date than 2025. For this reason, the proposed project would delay the opening of San Francisco Bay Trail segment around the perimeter of the landfill. However, the proposed project would not delay the completion of the planned San Francisco Bay Trail segment east of the landfill (see Figure 3.0-1). The completion of the planned segment east of the landfill is independent of this project. The planned San Francisco Bay Trail loop around the landfill is not a fundamental, connecting segment of the Bay Trail. Therefore, its possible delay would not result in a significant impact.

After the landfill stops accepting waste and final cover is installed, traffic through the gate of Newby Island would be reduced to only what is associated with the haul company's operations on the D-shaped area and the Recyclery, which will be substantially less traffic than the existing condition. The proposed expansion and modifications to existing operations would not result in increased traffic impacts to or conflicts with the pedestrian and bicycle facilities on nearby roadways, compared to existing conditions.

As part of the project, existing uses and their associated traffic that are not currently permitted would be allowed. If the project were not approved, those existing unpermitted uses and their associated traffic would be required to cease. Therefore, there will be more traffic and possible future conflicts with bicycles and pedestrians on the two lane bridge onto Newby Island than there would be if the proposed rezoning were not approved.

For a discussion of visual impacts from the proposed project as viewed from surrounding land uses, including the San Francisco Bay Trail, refer to **Section 3.2 Visual and Aesthetics**.

Impact TRAN – 3: The proposed project would not result in significant impacts to pedestrian or bicycle facilities compared to existing conditions. **(Less Than Significant Impact)**

3.3.3 Mitigation and Avoidance Measures

No mitigation is required or proposed.

3.3.4 Conclusion

Impact TRAN – 1: If the existing operating hours for the landfill and Recyclery are maintained, the proposed project would not result in significant intersection level of service impacts. If the landfill's and/or Recyclery's hours of operation were to be shortened, a PD Permit and a traffic study shall be required and the hours set such that significant intersection level of service impacts shall be avoided. For these reasons, the project would not result in significant level of service impacts. **(Less Than Significant Impact)**

Impact TRAN – 2: The proposed project would not result in a change of air traffic patterns. **(Less Than Significant Impact)**

Impact TRAN – 3: The proposed project would not result in significant impacts to pedestrian or bicycle facilities compared to existing conditions. **(Less Than Significant Impact)**

3.4 AIR QUALITY

The following discussion is based on an air quality impact analysis and air toxics risk assessment completed by *SCS Engineers* in June 2009. A copy of this report is included in Appendix C of this EIR.

A separate discussion regarding greenhouse gas emissions is provided in **Section 5.4 Global Climate Change** of this EIR.

3.4.1 Setting

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Topographical and meteorological conditions are also important. The project site is located in the City of San José, which is located within Santa Clara County, which is in the southern portion of the San Francisco Bay Area Air Basin (SFBAAB).

San José is located within the Santa Clara Valley, which is oriented in a northwest-southeast direction with mountain ranges on both sides. The Santa Cruz Mountains lie west and the Diablo range lies east.

The climate condition of San José is classified as temperate with about 16 inches of rainfall annually over the past 10 years. The temperatures typically range from the 30s to 60s in January and from the 50s to high 80s in July. The wet season generally is November through April and the dry season is from May through October.

The summers are warm and dry, where the average daily temperature is about 84 degrees Fahrenheit (F). The warmest months of the year are July and August with an average daily temperature of 84 degrees F. The average daily humidity in the summer months is around 31 to 36 percent, and continues through the fall at a constant 35 percent. The wettest month of the year is February with an average rainfall of 3.5 inches. The average daily humidity in the winter is 39 to 46 percent. Meteorological data have been collected from the Norman Y. Mineta San José International Airport (Airport) and the data shows that prevailing winds near the project site emanate predominately from the north-northwest with an average speed of 5.4 to 8.4 miles per hour. With ambient air as the pathway, three different mechanisms can cause odor complaints within the surrounding residential areas: inversion, diffusion, and advection. These three mechanisms are described below.

- Inversions are stable atmospheric conditions resulting in limited vertical air movements. Certain atmospheric conditions can cause a temperature inversion to occur, trapping gases near the ground. A temperature inversion is a situation where a warmer body of air is located above a colder air mass, inhibiting the vertical movement of gases. One situation in which a low level, or surface inversion, might take place is on a clear night when the earth's surface radiates heat away rapidly. If the air is clear, the ground and the air directly above it can be cooler than the air at higher altitudes. In many cases, temperature inversions are most prevalent from the evening to the early morning.
- Diffusion is the process whereby compounds move from a region of higher concentration to one of a lower concentration. Furthermore, diffusing compounds will move randomly between areas of high and low concentration in order to achieve equilibrium or equal spacing between compounds. This is a result of the compounds' random kinetic energy. For example, diffusion occurs when a drop of red dye is placed in a glass of water. The

compounds will migrate over the entire volume of water without an applied agitation, eventually turning the water an even shade of red. Diffusion would cause odors to be detected even upwind of the source, but not at any considerable distance. However, molecular diffusion is a weak, passive force and is unlikely to overcome strong wind currents.

- Advection is when odors are carried distances by wind. Assessing odor transport by advection is depended on two factors: the strength and angle of the wind and 2) the angle of the wind relative to the lines of equal value (isolines) of the variable being advected. The strongest advection occurs when the winds are oriented perpendicular (at 90 degrees) relative to the isolines. No advection occurs if the winds are parallel to the isolines. Based on a review of the meteorological data in the project site vicinity, the wind generally blows from the landfill toward the residences in Milpitas, indicating that advection may cause the dispersion of odors to nearby residences.

Sensitive receptors, as defined by the Bay Area Air Quality Management District (BAAQMD), are facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, school playgrounds, child-care centers, retirement homes, convalescent homes, hospitals, and medical clinics. Existing sensitive receptors near the project site include residential uses approximately 0.4 miles east of the site on the east side of I-880 at Dixon Landing Road and California Circle (refer to Figure 1.0-3).

3.4.1.1 Regulatory Framework and Background Information

Regulation of air quality is achieved through both federal and state standards and emission limits for individual sources of air pollutants. The 1977 federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the United States Environmental Protection Agency (USEPA) administers the Clean Air Act. The California Clean Air Act is administered by the California Air Resources Board (CARB) at the state level and by the Air Quality Management Districts at the regional and local levels. BAAQMD regulates air quality at the regional level over nine Bay Area counties, including Santa Clara County.

Federal Regulations

As discussed above, the USEPA administers the federal Clean Air Act. Through the federal Clean Air Act, the USEPA identified national ambient air quality standards (NAAQS) to protect public health and welfare. NAAQS have been established for the following Criteria Air Pollutants (CAPs): ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). Current standards for these pollutants are provided in Table 3.4-1. The state also has ambient air quality standards, which are discussed in the State Regulations section below and also included in Table 3.4.1. The “primary” standards have been established to protect the public health. The “secondary” standards are intended to protect the nation’s welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

Table 3.4-1: National and State Ambient Air Quality Standards				
Pollutant	Averaging Time	State Standards	National Standards^a	
			Primary^{b,c}	Secondary^{b,d}
Ozone	8-hour	0.07 ppm	0.075 ppm	0.075 ppm
	1-hour	0.09 ppm	--- ^e	---
Carbon Monoxide	8-hour	9.0 ppm	9.0 ppm	---
	1-hour	20 ppm	35 ppm	---
Nitrogen Dioxide	Annual	0.03 ppm	0.053 ppm	Same as primary
	1-hour	0.18 ppm	---	---
Sulfur Dioxide	Annual	---	0.03 ppm	---
	24-hour	0.04 ppm	0.14 ppm	---
	3-hour	---	---	0.5 ppm
	1-hour	0.25 ppm	---	---
PM ₁₀	Annual	20 µg/m ³	--- ^f	Same as primary
	24-hour	50 µg/m ³	150 µg/m ³	Same as primary
PM _{2.5}	Annual	12 µg/m ³	15 µg/m ³	---
	24-hour	---	35 µg/m ³	---
Lead	Calendar quarter	---	1.5 µg/m ³	Same as primary
	30-day average	1.5 µg/m ³	---	
<p>Notes: ppm = parts per million, µg/m³ = micrograms per cubic meter.</p> <p>^a Standards, other than for ozone and those based on annual averages, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.</p> <p>^b Concentrations are expressed first in units in which they were promulgated.</p> <p>^c Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the EPA.</p> <p>^d Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p> <p>^e The national 1-hour ozone standard was revoked by USEPA on June 15, 2005. A new 8-hour standard was established in May 2008.</p> <p>^f The annual PM₁₀ standard was revoked by USEPA on September 21, 2006 and a new PM_{2.5} 24-hour standard was established.</p>				

Pursuant to the Clean Air Act, the USEPA has classified air basins (or portions thereof) as either “attainment” or “nonattainment” for each criteria air pollutant based on whether or not the NAAQS has been achieved. The Clean Air Act requires that each state prepare an air quality control plan [State Implementation Plan (SIP)] and incorporate control measures to reduce air pollution if the state is in violation of the NAAQS. The USEPA has the responsibility to review all state SIPs to determine if they conform to the mandates of the Clean Air Act and will achieve air quality goals when implemented.

The Clean Air Plan also requires the EPA to identify and set forth National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect human health. Hazardous Air Pollutants (HAPs) are non-criteria air pollutants with short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects. HAPs are also known as Toxic Air Contaminants (TACs). TAC constituents within landfill gas typically consist of benzene, chloroform, methylene chloride, perchloroethylene, trichloroethylene, vinyl chloride, as well as other TACs.

The Clean Air Act established a technology-based approach for reducing air toxics, such that designated TACs are regulated under a two-phase strategy. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). MACT includes measures, methods, and techniques (such as material substitutions, work practices, and operational improvements) aimed at reducing toxic air emissions. The final MACT standard for municipal solid waste landfills took effect in 2004. The second phase of the strategy involves the EPA's Urban Air Toxics Strategy (UATS), which identifies pollutants and sources that have been determined to be issues in urban areas. Landfills are included on the regulated source list for the UATS due to emissions of vinyl chloride, benzene, and other TACs. Actual regulations under the UATS are not expected until after 2010.

Existing landfills are regulated under Section 111(d) of the federal Clean Air Act and new landfills are regulated under Section 111(b) of the federal Clean Air Act. Collectively, these regulations are known as New Source Performance Standards (NSPS) for municipal solid waste under 40 Code of Federal Regulations. NSPS and its associated Emission Guidelines (EG) for municipal solid waste landfills can have substantial effects on landfill operations. The intent of the NSPS rule and EG is to reduce emissions of landfill gas. The pollutants of concern contained within landfill gas are non-methane organic compounds and methane.

Under the Clean Air Act, major stationary sources are required to obtain Title V operating permits. Title V is a federally-enforceable state operating permit program set forth under 40 CFR Part 70. Major sources of CAPs or TACs are required to apply for and obtain Title V operating permits. All landfills subject to NSPS or EG are also subject to Title V. A Title V permit is an umbrella permit which consolidates all federal, state, and local air quality regulations and requirements into one permit. Currently, NISL has a Title V operating permit (No. A9013 and A5472).

Additional details regarding federal regulations are in Appendix C.

State Regulations

CARB regulates mobile emissions sources and oversees the activities of local Air Pollution Control Districts and regional Air Quality Management Districts, including BAAQMD. CARB regulates local air quality indirectly through the State Ambient Air Quality Standards (SAAQS) and vehicle emission standards. Other CARB duties include monitoring air quality in the state.

As mentioned previously, California has adopted ambient standards that are more stringent than the federal standards for the CAPs (refer to Table 3.4-1). Under the California Clean Air Act, areas have been designated as "attainment" or "non-attainment" for each criteria air pollutant based on whether or not the SAAQS has been achieved (similar to that of the federal Clean Air Act).

California state law defines TACs as air pollutants having carcinogenic or highly toxic non-carcinogenic effects. The State Air Toxics Program (AB 2588) has identified over 200 TACs, including 188 (federal) TACs and additional chemicals regulated by the state. The Air Toxics "Hot Spots" Information and Assessment Act seeks to identify and evaluate risk from air toxics sources. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a Health Risk Assessment (HRA) and, if specific thresholds are violated, are required to notify the public and implement risk reduction measures. BAAQMD is responsible for implementing AB 2588 and regulating facilities that emit air toxics in the SFBAAB via ongoing permitting and fee payment programs.

California implements air emissions regulations for landfills under the state's air pollution control authority. The state has established control criteria, collection and control system requirements, testing and reporting requirements, and exemption criteria for municipal solid waste landfills. Control criteria include levels of tested air contaminants, average maximum concentrations of total organics over a certain area, and maximum concentration of organic compounds such as methane at any location along the landfill surface. These requirements have been incorporated into the rules and regulations of BAAQMD.

The Calderon Amendments to the California Health and Safety Code (H&SC) require that all landfills perform gas and ambient air testing for ten compounds and report the results to the local air districts. The primary objective of these tests, called the air quality solid waste assessment tests (Air SWATs), is to provide a screening basis to characterize landfill air releases and subsurface gas migration at landfills. The Calderon program is implemented as part of the state air toxics program.

In 2006, California passed Assembly Bill 32 (AB32), which requires CARB to conduct greenhouse gas inventories. Landfills are included in the CARB inventories and account for about 1.2 percent of California greenhouse emissions. Implementation of early action measures and mandatory reporting requirements are currently pending, and will directly affect landfills. CARB is also working on a statewide cap and trade program.

Additional details regarding state regulations are in Appendix C.

Regional Regulations

BAAQMD is primarily responsible for assuring that the national and state ambient air quality standards are attained and maintained in the Bay Area. BAAQMD is also responsible for controlling stationary sources of pollution, as well as implementing transportation control measures to reduce mobile source emissions. BAAQMD has jurisdiction over much of the nine Bay Area counties.

The adopted BAAQMD CEQA Guidelines (1999) provides procedures for evaluating possible air quality impacts consistent with CEQA requirements. BAAQMD recently released CEQA Draft Air Quality Guidelines (September 2009), which is an update to its current CEQA Guidelines. The draft guidelines include updated thresholds for criteria air pollutants, toxic air contaminants (TACs), and human health risks. The Draft Air Quality Guidelines (if adopted) would supersede BAAQMD's current BAAQMD CEQA Guidelines (1999). It is anticipated by BAAQMD that their CEQA Air Quality Guidelines update will be adopted by October 2009. According to BAAQMD, projects that have released their NOP prior to the adoption of the 2009 draft guidelines should analyze their air quality impacts according to the BAAQMD CEQA Guidelines (1999).⁴⁹

BAAQMD is responsible for implementing and enforcing the NSPS, EG, MACT, and Title V programs for landfills. In the future, BAAQMD will likely be required to implement the UATS regulations. BAAQMD also issues permits to operate (PTO) for facilities (including NISL) which meet the permitting criteria specified in Regulation 2, Rule 1 (Rule 2-1). BAAQMD Rule 2-1 specifies authority to construct (ATC) and permitting requirements for new or modified sources. An ATC/PTO is required to be obtained from BAAQMD for the proposed NISL expansion project.

⁴⁹ Hilken, Henry. BAAQMD Division Director for Planning, Rules, and Research. Santa Rosa public workshop. 9 September 2009.

BAAQMD Rule 2-2 describes new source review (NSR) requirements. Rule 2-2 applies to all new and modified emission sources subject to Rule 2-1 permitting requirements. The purpose of Rule 2-2 is to provide for the review of new and modified sources and provide mechanisms, including the use of Best Available Control Technology (BACT), BACT for toxics (TBACT), and emission offsets, by which ATCs for such new and modified sources may be granted.

BAAQMD Rule 2-5 describes requirements pertaining to NSR of TACs. The purpose of the rule is to provide for the review of new and modified sources of TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from this exposure, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced.

In addition to the above rules, BAAQMD has adopted numerous other rules that affect landfills, primarily Rule 8-34 which describes regulations associated with emissions from non-methane organic compounds (NMOCs) and methane at solid waste disposal sites. Rule 8-34 implements the NSPS and EG requirements for municipal solid waste landfills.

Each of these regulations, as well as the NSPS/EG requirements, would need to be incorporated into the BAAQMD ATC/PTO and Title V permit revision for the proposed expansion project.

Additional details regarding regional regulations are in Appendix C.

3.4.1.2 ***Criteria Air Pollutants and Odor***

Criteria Air Pollutants

The air quality of the SFBAAB is determined by routinely monitoring changes in the quantities of criteria pollutants in the ambient environment. Air quality studies in the Bay Area generally focus on five pollutants: carbon monoxide (CO), ground level ozone, suspended particulate matter (*i.e.*, PM₁₀ and PM_{2.5}), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Table 3.4-2 identifies the major criteria pollutants, their characteristics, health effects, and typical sources.

Table 3.4-2: Major Criteria Pollutants			
Pollutant	Characteristics	Health Effects	Major Sources
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> – Impairment of oxygen transport in the bloodstream – Aggravation of cardiovascular disease – Fatigue, headache, confusion, dizziness – Can be fatal in the case of very high concentrations 	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors, primarily reactive hydrocarbons and oxides of	<ul style="list-style-type: none"> – Eye irritation – Respiratory function impairment 	The major sources ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents

Table 3.4-2: Major Criteria Pollutants			
Pollutant	Characteristics	Health Effects	Major Sources
	nitrogen. Often called photochemical smog.		and fuels.
Particulate Matter	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	– Aggravation of chronic disease and heart/lung disease symptoms	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	– Increased risk of acute and chronic respiratory disease	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	– Aggravation of chronic obstruction lung disease – Increased risk of acute and chronic respiratory disease	Diesel vehicle exhaust, oil-powered power plants, industrial processes.

Air quality in this area is a function of the criteria pollutants emitted locally, the existing regional ambient air quality, and the meteorological and topographical factors, which influence the intrusion of pollutants into the area from sources outside the immediate area.

As discussed previously, geographic areas are designated “attainment” if these standards are met and “non-attainment” if they are not met (*i.e.*, the NAAQS or SAAQS are exceeded). Classifications for the SFBAAB for both state and federal criteria air pollutants (CAP) standards are shown in Table 3.4-3.

Table 3.4-3: San Francisco Bay Area Air Basin Criteria Air Pollutants Attainment Status		
Pollutant	Federal Standard Classification	State Standard Classification
Carbon Monoxide (CO)	Attainment	Attainment
Ozone	Nonattainment	Nonattainment
PM ₁₀	Unclassified	Nonattainment
PM _{2.5}	Nonattainment	Attainment/Unclassified
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment

As discussed previously, BAAQMD is responsible for assuring that the national and state ambient air quality standards are attained and maintained in the Bay Area. In Santa Clara County, ozone and particulate matter are the pollutants of greatest concern since measured air pollutant levels exceed the standards at times (*i.e.*, the area is in nonattainment). Therefore, sources of ground level ozone, such as volatile organic compounds (VOCs)⁵⁰ and oxides of nitrogen dioxide (NO₂) emissions, and

⁵⁰ Note that VOCs are accepted by the BAAQMD as being equivalent to Precursor Organic Compounds (POCs) and Reactive Organic Gases (ROGs). These different acronyms are considered to be equivalent throughout this report.

sources of PM₁₀ (e.g., fugitive dust, combustion, etc.) are of greatest concern for BAAQMD. Sulfur oxides are not considered a pollutant of concern for this area because it is not currently an issue within the SFBAAB.

Odor

The following information about odor is from the odor assessment completed for the project, which is included in Appendix C of the Draft EIR. Objectionable odors may be emitted from almost any source. The landfill and outdoor activities at the Recyclery produce objectionable odors due to the nature of their operations. Assessing odor impacts depends on such variables as wind speed, wind direction, and the sensitivities of receptors to different odors.

Odor Perception

Odor is a sensation resulting from an applied stimulus to the olfactory organ. The stimuli in this case are chemicals. The level of sensitivity to odors varies among individuals. The human nose can detect a wide variety of chemicals even in minuscule concentrations. It is the detection of volatile chemical compounds that constitutes an odor or smell.

Odiferous Waste Stream

Due to the nature of the operations at the project site, the greatest odor generating potential comes from the raw MSW that the landfill handles and the food waste handled at the Recyclery. MSW (including green waste), which arrives at the landfill with a high moisture content, can ferment rapidly and may produce a more concentrated odor at the active face of the landfill or in stockpile. Wallboard and dry wall, common C&D material, can degrade in the landfill and form hydrogen sulfide in the landfill gas, which smells like rotten eggs. Landfill gas also contains other odiferous compounds. Composting and green waste operations can produce odors. Operations at the Recyclery can produce odors from the processing and storage of food waste.

Physical Factors Affecting Odors

Effective odor management takes into consideration the physical factors which can enhance or subdue offensive odors. Some of the factors that can be managed are oxygen, temperature, moisture content, time, dilution, air stability, and dust.

- Oxygen – The presents or absence of oxygen can greatly affect the perceived strength of an odor. Anaerobic conditions (without oxygen) typically produces the strongest odors. The presence of oxygen can greatly reduce the production of offensive odors.
- Temperature – The biochemical reactions which produce offensive odors are generally dependent on temperature. For every increase of 20 degrees F above ambient temperature, the speed of the biological reaction doubles.
- Moisture Content – Moisture displaces oxygen and can greatly affect the rate of decay of MSW. As the moisture content increases the oxygen content decreases, creating a favorable environment for biochemical reactions and the creating of offensive odors. Water in decomposing materials can volatilize as well, transferring offensive odors to ambient air, and providing a pathway for odors to travel beyond their source. Lowering the moisture content reduces the production of offensive odors.

- Time – Offensive odors are produced by biochemical reactions resulting in MSW degradation. The rate of degradation is proportional to the strength and intensity of the odor. The longer a substance is allowed to decompose, the stronger the odor is. Reducing the time food waste is present at the Recyclery could reduce the proliferation of offensive odors.
- Dilution – The intensity of an odor can be reduced when diluted with ambient air. Stagnant air causes odors to concentrate and be perceived as more offensive.
- Air Stability – Air stability is affected by wind speed, air temperature, and topography. The management of these circumstances can greatly reduce the spread of offensive odors.
- Dust – Odorous compounds tend to attach to dust particles. Dust reduction around the landfill and Recyclery can reduce the distance an odor might travel.

Odor Characterization

Odors are commonly referred to as good, bad, or neutral and can be classified by their concentration, character, intensity, persistence, frequency, and duration.

- Concentration – Odor concentrations are referred to as odor units which can be measured as a detection threshold and a recognition threshold. Odor units are defined as the volume of diluted air divided by the volume of odorous sample air at detection or recognition. The detection threshold is how much an odor is diluted before it is undetectable by a trained panelist. The recognition threshold is the greatest amount an odor may be diluted and still be recognized.
- Character – The character of an odor is derived from a verbal description of the odor itself. A standard odor descriptor is typically used to describe various types of odors and is commonly used in the characterization of odors derived from pollutants. The International Association on Water Pollution Research and Control (IAWPRC) published what is known as a Flavor Wheel and it is used to describe the character of an odor.
- Intensity – The intensity of an odor is generally referred to as the strength of the odor above the threshold of an approved standard gas. Typically, the odor is compared to known concentrations of butanol. The threshold can be determined from an olfactory meter as well and would be given a value in odor units.
- Persistence – Persistence is defined as the rate of change of the intensity of an odor under dilution. Even though two odors may have the same intensity, as they are diluted their persistence may not necessarily be the same. The more air it takes to dilute an odor, the higher the persistence.
- Frequency and Duration – The frequency and duration is also known as hedonic tone and describes odiferous events that can significantly affect people. Mathematical models are developed to estimate the concentration of a specific gas downwind of a source. The odors are then rated using a scale from -10 (most unpleasant) to +10 (most favorable). Neutral odors are rated as zero. This method quantifies the dispersion of gases during different weather conditions.

3.4.1.3 Existing and Permitted Landfill Emissions

Discussing the conditions of a landfill requires different terms and careful consideration of the circumstances. “Existing” conditions in this section generally identify the air emissions that are calculated to result from waste currently handled at Newby Island. Emissions under existing conditions, as defined by BAAQMD, consists of the three most recent years of emissions.

Emissions under permitted (as well as project) conditions are calculated by determining the year of maximum landfill gas generation. Because landfill gas generation rises to a peak for only one single year (typically the year after landfill closure) and then decreases every year after that, the emissions from the peak year represents the maximum possible emissions for the landfill, and emissions for every year after would be less than the maximum possible emissions for the landfill. Therefore, the emission calculations are conservative. Additional details regarding the calculation of the emissions, including the model and assumptions used, are included in Appendix C.

In order to compare the permitted (and project) emissions to existing emissions that were calculated in the same manner, “Immediate closure” conditions are the maximum emissions if the landfill closed in 2007.⁵¹ “Permitted” conditions referenced in this section generally identify the air emissions that are calculated to result from waste handled at Newby Island under the current SWFP. As discussed previously in the EIR, no discretionary actions are required for the existing facilities to continue operating under existing entitlements until existing permitted capacity (about 8.4 million cubic yards remaining) is used up. The hauling company corporation yard would have to move to a different location, but the trucks would continue to deliver waste and recyclables to Newby Island.

Air Emissions

In general, municipal solid waste landfills can be sources of gas mixtures from the natural decomposition of organic wastes and vapors from volatile compounds present in the waste. Volatile organics are produced by biological processes or chemical reactions in the landfill. Landfill gas, consisting primarily of methane and carbon dioxide (CO₂), is produced by the actions of microorganisms in the landfill under anaerobic conditions. Landfill gas consists of approximately 50 percent carbon dioxide (CO₂) by volume, 50 percent methane, and trace amounts of non-methane organic compounds (some of which are VOCs). The five major effects of landfill gas emissions are: 1) human health and vegetation effects from ozone produced by VOC emissions, 2) carcinogenicity and other possible non-cancer health effects from TAC emissions, 3) global warming effects from methane emissions, 4) explosion hazards, and 5) odors and nuisance. The project’s impact on global climate change is discussed in **Section 6.5**.

Criteria Air Pollutants

NISL has been in operation and generating landfill gas since 1932. Currently, the landfill has a landfill gas collection and control system consisting of a network of gas collection wells and a landfill gas blower/flare station with two enclosed flares. The flares are used primarily as backup control. The primary gas control is accomplished by combustion in the on-site landfill gas to energy plant (GRS facility) and the WPCP, which burns some of the landfill gas in various generators at the plant. As such, the primary sources of landfill operational emissions originating from the NISL include VOC and TAC emissions from uncollected landfill gas, CAP emissions from landfill gas

⁵¹ Under Immediate Closure conditions, the landfill was assumed to close in 2007 because the most recent data at the time the analysis was completed was 2007 data.

control equipment, emissions of Precursor Organic Compounds (POCs)⁵² from composting, and PM₁₀ from fugitive dust sources (*e.g.*, disturbances of earth, dumping of waste, application of daily cover, etc.).

A summary of the CAP emissions from landfill gas under existing, immediate closure, and permitted conditions is provided in Table 3.4-4. The CAP emissions are estimated based on actual and projected disposal rates, actual operational records, stack testing information, permit limits, and/or regulatory emission factors that are representative of real emissions. As discussed previously, the CAP emissions under existing conditions are emissions from NISL from the three most recent years of emissions.

Table 3.4-4: Criteria Air Pollutant Emissions in Tons Per Year					
Source	Criteria Pollutant Emissions				
	NO_x	CO	PM₁₀	SO_x	VOCs/ POCs/ ROGs
Existing Conditions					
Landfill Gas Surface Emissions	0.00	0.00	0.00	0.00	25.14
Landfill Gas Flares	11.41	45.62	7.51	22.49	3.19
Composting	0.00	0.00	0.00	0.00	87.70
Mobile Sources (Landfill and Recyclery)*	8.75	3.95	150.26	0.01	1.06
GRS Plant	76.96	157.09	3.78	3.78	1.37
WPCP	19.37	87.17	4.84	3.63	2.42
TOTAL	116.49	293.83	165.98	29.91	120.88
Immediate Closure Conditions					
Landfill Gas Surface Emissions	0.00	0.00	0.00	0.00	26.23
Landfill Gas Flares	12.17	48.66	8.01	23.99	3.40
Composting	0.00	0.00	0.00	0.00	87.70
Mobile Sources (Landfill and Recyclery)*	8.75	3.95	150.26	0.01	1.06
GRS Plant	80.30	163.9	3.94	3.94	1.43
WPCP	20.21	90.95	5.05	3.79	2.53
TOTAL	121.43	307.47	167.26	31.73	122.35
Permitted Conditions					
Landfill Gas Surface Emissions	0.00	0.00	0.00	0.00	35.11
Landfill Gas Flares	14.22	56.87	9.36	28.03	3.98
Composting	0.00	0.00	0.00	0.00	140.34
Mobile Sources (Landfill and Recyclery)*	9.67	4.37	183.18	0.01	1.17
GRS Plant	114.32	225.75	5.39	5.39	1.97
WPCP	31.54	141.91	7.88	5.91	3.94
TOTAL	169.74	428.90	205.81	39.34	186.50
Project Conditions					
Landfill Gas Surface Emissions	0.00	0.00	0.00	0.00	41.77
Landfill Gas Flares	14.22	56.87	9.36	28.03	3.98
Composting	0.00	0.00	0.00	0.00	140.34

⁵² Note that reactive organic gases (ROGs) are accepted by the BAAQMD as being equivalent to VOC and POC, and these different acronyms are considered to be equivalent throughout this report.

Table 3.4-4: Criteria Air Pollutant Emissions in Tons Per Year

Source	Criteria Pollutant Emissions				
	NO _x	CO	PM ₁₀	SO _x	VOCs/ POCs/ ROGs
Mobile Sources (Landfill and Recyclery)*	8.75	3.95	150.26	0.01	1.06
GRS Plant	114.32	225.75	5.39	5.39	1.97
-IC Engines (emissions from expansion)	25.27	88.43	4.21	2.83	0.94
WPCP	31.54	141.91	7.88	5.91	3.94
TOTAL	194.09	516.91	177.10	42.18	193.99

Notes: Due to rounding of emissions, some totals do not add up perfectly.

* In estimating mobile source emissions, landfill operational vehicles and equipment emissions were not considered, as it was assumed no additional equipment or vehicles would be required as part of the proposed project and therefore there would be no change in emissions from these sources for the project under the existing, immediate closure, permitted, or project conditions. The estimated emissions for mobile sources under permitted conditions are based on vehicle traffic rates at the maximum permitted waste acceptance rate.

Toxic Air Contaminants

The primary avenues for the escape of landfill gas derived emissions associated with NISL include VOC and TAC emissions from uncollected (fugitive) landfill gas and TAC emissions from landfill gas combustion. Combustion of NISL gas occurs in the landfill's two enclosed flares, in the internal combustion engines at the GRS landfill gas to energy facility, and in various generator engines at the WPCP.

TAC constituents within landfill gas typically consist of benzene, chloroform, methylene chloride, perchloroethylene (PCE), trichloroethylene (TCE), vinyl chloride (VC), as well as other TACs. Details regarding the types of TACs and their emissions under existing and permitted conditions are included in Appendix C.

Odorous Emissions

As bacterial decomposition proceeds, odoriferous compounds can escape from the landfill surface through cracks in the surface cover. Other possible sources of odors are the actual wastes. Some household and consumer products contain substances with distinctive odors.

Because offensive odors rarely cause any physical harm and no requirements for their control are included in state or federal air quality regulations, the BAAQMD does not currently have any rules or regulations that place quantifiable limitations on emissions of odorous substances. Any actions related to odors are based on citizen complaints to local governments and BAAQMD.

The following discussion summarizes information about past odor impacts that effected residents in the City of Milpitas and the mitigation measures developed to reduce those impacts.

In October 2003, the Milpitas City Council held a public hearing to receive testimony about chronic odor episodes within the City of Milpitas. Stakeholders included members of the community, regulatory agencies (including CIWMB – now CalRecycle, BAAQMD, and the City of San José LEA), and on a voluntary basis, possible odor generators within the sphere of influence of the City of Milpitas. The City of Milpitas Sewage Collection system, San José/Santa Clara WPCP, NISL and

compost facility, Zanker Road landfill/compost facility, and San Francisco Bay and creeks were identified as possible odor generators. Following the hearing, the City of Milpitas asked the stakeholders to voluntarily participate in ongoing “Odor Solution Meetings” to develop a coordinated approach to respond and address possible odor generation. The City of Milpitas also asked stakeholders to work with the City to develop and implement an Odor Action Plan. The purpose of the plan was to reduce odor incidents by obtaining the cooperation and coordination of stakeholders and by simplifying the complaint reporting process. The Odor Action Plan included the following principles:

- Centralized Complaints Handling – Publicizing use of the BAAQMD Hotline (1-800-334-6367) to reduce confusion about how to submit complaints and regulatory duplication.
- Timely Notifications – Quick feedback to potential sources about odor events allows them to adjust or stop their odor generating processes. Sources identified this component as the most effective way to help them control odors from their sites.
- Prevention/Oversight Accountability – Development and implementation of best management practices at each potential source to yield consistent, responsive, and effective odor control.

The City of Milpitas Odor Action Plan (see Appendix F) outlines existing best management practices (BMPs) implemented by odor generators to control odors. The BMPs for NISL include the Odor Minimization Plan prepared by the landfill operator (see Appendix F) which includes odor monitoring protocols, summary of meteorological conditions affecting migration of odors, and a complaint response procedure. Other noted BMPs include:

- Increasing monitoring of meteorological conditions at the facility and using meteorological data to minimize possible odor impacts beyond the site boundary;
- Completing research and developing of a program to assess the advantages and disadvantages of composting yard waste on the top of the landfill; and
- Receiving dried sludge from the WPCP for disposal at the landfill during periods when meteorological conditions favor maximum odor dispersion and dispersion in a direction away from receptors.

According to the LEA, BAAQMD acted as the coordinating regulatory agency, providing emailed alerts to all potential odor sources when an odor complaint was received. BAAQMD tracked all complaints and the complaints were charted and reported to the City of Milpitas and the other participating entities. BAAQMD eventually notified the City of Milpitas that there was no longer a need for the extraordinary commitment of BAAQMD staff time because the odor complaints had dropped to insignificant numbers – most often at zero. According to the LEA, the management of NISL and the Recyclery were proactive and cooperative during this process. According to the LEA, as a result of this process, the composting facilities at NISL were moved from the east side of the landfill to the west side (which was further from receptors in the City of Milpitas) to reduce odor impacts to Milpitas.

The City of Milpitas staff implemented the Odor Action Plan and provided the Milpitas City Council with quarterly status reports for the next three and one half years. In June 2007, the Milpitas City Council reduced the reporting frequency from quarterly to annually and all other provisions of the Action Plan were to be continued.

The nearest residence to the project site is approximately 0.4 miles from the landfill. NISL averages approximately five odor related complaints a year from the residents of the City of Milpitas, none of which have resulted in violations. Residents in the surrounding community can register odor related complaints on the City of Milpitas website (http://www.ci.milpitas.ca.gov/odor_outreach.htm) or the BAAQMD website (<http://baaqmd.gov/enf/complaints.htm>). According to BAAQMD records, in the past three years (September 30, 2005 through September 30, 2008) there have been 155 unconfirmed odor complaints and three confirmed odor complaints about the landfill. Every time a complaint is registered on the City of Milpitas or BAAQMD websites, NISL staff review the current landfilling activities which include examining the current waste streams as well as meteorological data at the time of the complaint. According to NISL's Odor Impact Minimization Plan, odor complaint response protocol is as follows:

1. If an odor complaint is received by the LEA, the LEA will notify the landfill operator as soon as possible.
2. The landfill operator will log the event and the response for later LEA review. The LEA (if available) and landfill operator will go to the location of the complaint to verify that the compost facility is indeed the source of the odor and will attempt to characterize the odor so that they can trace the odor back to a specific operational phase of the facility.
3. The landfill operator will document the complaint(s) in the site operations log.
4. The landfill operator will assess the complaint and the nature of the source of the odor complaint and will make a recommendation to the LEA within 24 hours of receiving the complaint or 48 hours should the complaint be received on the weekend or a holiday.
5. The landfill operator will implement one or more of the management practices included in the Odor Impact Minimization Plan (refer to Appendix F), depending on the particular source of odor and the time of year.
6. The landfill operator will contact the complainant (if known) after the corrective action is taken to assess success of the action. If necessary, the landfill operator, LEA, and complainant (if choosing to participate) will meet within a reasonable time frame to assess the original problem and result after each complaint.
7. Results and actions will be documented in the site operations log, which serves as the facility's permanent record.

Currently, NISL employs a comprehensive approach to controlling odors by utilizing several odor control measures (OCMs), which are outlined in the Odor Impact Minimization Plan on file at the California Department of Resources Recycling and Recovery (CalRecycle) and included in Appendix E. The utilization of landfill gas collection and control systems, daily cover, water trucks, odor eliminating additives, meteorological stations, and the proper maintenance of windrows, when employed in concert, can be effective in reducing the creation as well as the transport of offensive odors. The OCMs employed at the landfill and Recyclery are listed below.

Landfill Odor Control Measures:

- Use the landfill gas collection and control system to reduce odors associated with landfill gas migrating out of the landfill;
- Use a water truck to dampen the unpaved surface of the landfill to reduce dust related nuisances (an odor eliminator additive is mixed with the water to eliminate odors which adhere to dust particles);
- Immediately cover odiferous loads once received on the site;
- Use daily cover on all MSW placed on the landfill; and

- Prohibit the load or transport of any biosolids into the landfill any time such loading and transporting results in actual odor complaints correlated to biosolids from off-site properties.

Recyclery Odor Control Measures:

- Use a push blower on the tipping floor to remove excess debris and dissolved organics;
- Process feedstock, green waste, and food waste within 48 hours of arrival on site and any malodorous materials within 24 hours of receipt (note that according to the landfill operator, best efforts are put forth to refrain from exposing particularly malodorous materials to the ambient environment when weather conditions or other factors would increase the intensity or duration of odor events in Milpitas and other nearby sensitive receptors);
- Use a windrow turner to ensure thorough mixing of feedstock materials and re-construction of piles to maximize porosity and thorough composting;
- Use water trucks to minimize dust transport (an odor eliminator additive is missed with the water to eliminate odors which adhere to dust particles);
- Patrol all windrow isles on a daily basis to ensure spilled materials are cleaned up; and
- Maintain windrows to have the proper carbon to nitrogen ration, moisture content, and are turned regularly.

In addition, NISL and the Recyclery have installed weather stations to track wind speed, gust, and direction. The atmospheric conditions (e.g., precipitation, wind speed and direction) are monitored several times daily. The stations utilize an alarm and notification system which alerts staff that the wind direction and speed is favorable for odors being carried off the site through advection to the residents of Milpitas. When an alert is triggered, staff immediately checks on-site activities for odor potential, ceases non-essential processing, and adjusts deodorant delivery system for optimum performance. The conditions are then monitored until the conditions are no longer present.

3.4.2 Air Quality Impacts

3.4.2.1 Thresholds of Significance

For the purpose of this project, an air quality impact is considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or project air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Thresholds for ROG, NO_x, PM₁₀, and CO

Based on BAAQMD's CEQA Guidelines (1999), operational impacts of a proposed project are considered significant if the project results in a net emissions increase of the following:

- 15 tons per year (or 80 pounds per day) of ROG (assumed equivalent to VOC/POC);
- 15 tons per year (or 80 pounds per day) of NO_x;
- 15 tons per year (or 80 pounds per day) of PM₁₀; or
- Ground level concentrations of CO over 20 parts per million (ppm) averaged over one hour or over nine ppm averaged over eight hours.

Thresholds for Human Health Risks

Based on BAAQMD's CEQA Guidelines (1999), a project would result in significant human health risks if a health risk assessment determined the following:

- The calculated Hazard Index (HI) for receptors would be 1.0 or greater; or
- The increased cancer risk for receptors would be greater than 10 in 1,000,000 (10^{-5}).

Thresholds for Odorous Emissions

According to the BAAQMD CEQA Guidelines (1999), determining the significance of possible odor impacts involves determining whether the project would result in an odor source and receptors being located within distances identified in Table 4 of the BAAQMD CEQA Guidelines. Table 4 of the BAAQMD CEQA Guidelines identifies the distance for possible odor impacts from a sanitary landfill as one mile.

For projects involving a new receptor being located near an existing odor source(s), the District's inventory of odor complaints for the nearest odor emitting facility(ies) should be reviewed for the previous three years. For a project locating near an existing source of odors, the project should be identified as having a significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there has been:

- more than one confirmed complaint per year averaged over a three year period, or
- three unconfirmed complaints per year averaged over a three year period

For new odor sources locating near existing receptors, the impact analysis should be based on a review of odor complaints for similar facilities.

3.4.2.2 Discussion of Impacts

The project proposes to increase the permitted height of the landfill from 150 feet to 245 feet (NGVD29). The proposed height increase would add approximately 15.12 million cubic yards of capacity to the landfill. The additional volume of 15.12 million cubic yards is estimated to equate to approximately 10.3 million tons of landfilled decomposable waste. This additional waste is estimated to result in a maximum increase of approximately 1,070 cubic feet per minute (cfm) of landfill gas generation compared to permitted conditions.

Based on a strict interpretation of the CEQA Guidelines, the project's air quality impact is the increase in air emissions from landfill activities resulting from the materials accepted in excess of existing conditions. Therefore, the existing conditions are the "baseline" condition in identifying project impacts. Emissions under permitted conditions are provided to assist the decisions makers in determining whether the real world impacts of the requested approvals should be considered a significant effect on the environment.

In terms of air quality, the proposed project would result in impacts related to increases in fugitive emissions from the landfill surface and an increase in emissions from landfill gas control devices due to the increase in landfill gas collected.

The number of truck trips under permitted conditions is greater than under the existing and project conditions. The number of truck trips is related to the tonnage of MSW brought to the landfill (refer to the discussion in Section 1.4.2.1). As discussed in **Section 1.0 Project Description**, since 1998, MSW quantities disposed at NISL have varied from an average of 2,089 to 2,560 tpd. In 2006, the average tpd was 2,142. In 2007, the average tpd was 2,208. Under permitted conditions, an average of 3,260 tpd of MSW is allowed to be accepted at NISL. The project is proposing to limit the number of truck trips to those under existing conditions. In comparison to existing truck volumes, truck volumes under permitted conditions (which would have a greater amount of MSW being delivered to NISL) would be greater. For this reason, mobile source emissions are greater under permitted conditions than existing or project conditions.

Currently, the site receives about 24,000 tons of organics per month. Of that, 11,800 tons per month are composted.⁵³ As the project does not involve an increase in the rate of landfill or composting operations, there is no change in emissions from landfill operation sources or composting rates and emissions between the permitted and project conditions. Therefore, emission from landfill and composting operation sources are not considered further in this discussion.

Criteria Air Pollutant Emissions

An analysis was completed to estimate the increase of CAP emissions with the proposed project. The increase in emissions is attributed to fugitive and flare emissions from the additional landfill gas generated as a result of the increased disposal tonnage associated with the proposed project. Like emission estimates calculated under the immediate closure and permitted conditions, emission under project conditions were calculated by determining the year of maximum landfill gas generation. CAP emissions under project conditions are provided in Table 3.4-4. It is the intent of Allied Waste to use the additional recovered landfill gas produced by the proposed expansion to generate electricity at the GRS Plant (rather than using the flares or sending the gas to the WPCP). Therefore, project emissions are generated from the GRS Plant, as shown in Table 3.4-4. Details regarding the calculation of project emissions, including model assumptions, are included in Appendix C.

The estimated CAP emissions under project conditions were compared to existing, immediate closure, and permitted conditions in Table 3.4-5. Using the language in CEQA Guidelines §15126.2(a), the project's impact is based on the net emissions between the immediate closure and project conditions. The results show that emissions from the proposed project would exceed the BAAQMD threshold of significances for NO_x and ROG_s. The City Council may also want to

⁵³ As discussed previously, not all incoming organic material is composted. Some incoming organic materials are used for erosion control on- and off-site, biofuel, mulch, and alternative daily cover. Source: Gambelin, Don. Email from Allied Waste. 24 August 2009.

consider the difference between permitted conditions and proposed conditions, which are also shown in Table 3.4-5.

Table 3.4-5: Net Project Criteria Air Pollutant Emissions					
Source	Criteria Pollutant Emissions				
	NO _x	CO	PM ₁₀	SO _x	VOCs/ POCs/ ROGs
	(tons per year)				
Net Project Emissions when Compared to Existing Emissions					
Project Condition Emissions	194.09	516.91	177.10	42.18	193.99
Existing Condition Emissions	116.49	293.83	165.98	29.91	120.88
Net Project Emissions	77.60	223.08	11.12	12.27	73.11
Net Project Emissions when Compared to Immediate Closure Emissions					
Project Condition Emissions	194.09	516.91	177.10	42.18	193.99
Immediate Closure Condition Emissions	121.43	307.47	167.26	31.73	122.35
Net Project Emissions	72.66	209.44	9.84	10.45	71.64
Net Project Emissions when Compared to Permitted Emissions					
Project Condition Emissions	194.09	516.91	177.10	42.18	193.99
Permitted Condition Emissions	169.74	428.90	205.81	39.34	186.50
Net Project Emissions	24.35	88.01	-28.81	2.84	7.49
BAAQMD Thresholds of Significance	15	---	15	---	15
Note: Emissions in bold text exceed BAAQMD’s threshold of significance.					

As required by BAAQMD regulations, the project proponent would be required to purchase NO_x and VOCs/POCs/ROGs offsets for emissions in excess of BAAQMD's thresholds of 15 tons per year of NO_x and 15 tons per year of VOCs/POCs/ROGs or obtain the offsets through BAAQMD's Small Facility Banking Account. The project's compliance with BAAQMD regulations would result in a less than significant impact from project emissions.

BAAQMD does not have a threshold of significance for sulfur oxides (SO_x). In BAAQMD's New Source Review (NSR) Rule 2-2, there is a major modification threshold for SO₂ of 40 tpy and a prevention of significant deterioration (PSD) threshold of 250 tpy, neither of which is exceeded by the proposed project.⁵⁴ For this reason, based on all available guidelines, the project SO_x emissions are not significant.

Impact AIR – 1: The project would exceed BAAQMD thresholds for nitrogen oxide (NO_x) and VOCs/POCs/ROGs. **(Significant Impact)**

⁵⁴ The major modification threshold is the level of increase in emissions of a particular pollutant associated with a modification (such as an increase in landfill capacity) above which the project is considered to be a major modification, thus triggering public notice requirements and offset requirements as part of the permitting process under BAAQMD's New Source Review (NSR) rule. The prevention of significant deterioration (PSD) threshold is the level of increase in emissions of a particular pollutant associated with a modification (such as an increase in landfill capacity) above which the additional requirements of PSD (e.g., Best Available Control Technology, emission impact modeling, etc.) must be implemented to demonstrate project emissions will not interfere with attainment of applicable National Ambient Air Quality Standards. As BAAQMD identified no specific CEQA significance threshold for SO_x, these other thresholds were used for informational purposes.

Ground Level Carbon Monoxide Concentration

The CO emissions come from both the control devices used to destroy the landfill gas and haul vehicles at the landfill. The ground level concentrations of carbon monoxide from the flare at the landfill under existing, immediate closure, permitted, and project conditions were calculated. Details regarding the model and assumptions are included in Appendix C. The results are summarized in Table 3.4-6 below and show that the project would not result in significant ground level carbon monoxide concentrations.

Impact AIR – 2: The project would not result in significant ground level carbon monoxide concentrations. **(Less Than Significant Impact)**

Table 3.4-6: Ground Level Carbon Monoxide Concentration		
	CO Concentration (in ppm)	
	1-hour average	8-hour average
<i>BAAQMD Threshold of Significance</i>	20	9
Existing Conditions	5.16	2.97
Immediate Closure Conditions	5.20	3.78
Permitted Conditions	5.60	3.37
Project Conditions	5.60	3.37

Chemicals of Potential Concern (Toxic Air Contaminants)

In accordance with BAAQMD CEQA Guidelines, a health risk assessment (HRA) was completed to determine possible human health impacts that could be attributed to the chemicals of potential concern, including TACs.

The following categories of chemicals were assumed to be sources of risk at the project site due to their presence in landfill gas or in the exhaust of vehicles used at the landfill:

- VOCs such as acetone, benzene, and vinyl chloride;
- Heavy Metals and other inorganic constituents such as mercury; and
- Compounds present in the emissions from haul vehicles such as benzene and diesel particulate matter.

From these categories, a final list of specific chemicals of potential concern (COPC) was chosen for further risk analysis. A total of 44 separate compounds were identified or were expected to be present in landfill gas or emissions from control devices present at the site, or were expected to be present in the exhaust from mobile sources. The HRA included an exposure assessment, toxicity evaluation, and risk characterization steps.

For the HRA, several zones of radii around the site were delineated to offer a comprehensive description of possible impacts to off-site receptors. The zones include radii of 350 feet, 3,000 feet, and the worst-case locations for three types of risk receptors, which included 1) off-site

commercial/industrial worker, 2) off-site residential adult, and 3) off-site residential child. The nearest residential use to the site is approximately 0.4 miles southeast of the site.

Based on an analysis of potential exposure pathways, all surface soil, groundwater, surface water, and food chain pathways were deemed incomplete⁵⁵ or insignificant for possible receptors since the airborne emissions from the landfill are not expected to impact soil, water, and food pathways to any significant degree. Therefore, no ingestion or dermal pathways were evaluated in the HRA, and only inhalation pathways associated with landfill gas emissions were assessed.

Upon completion of the emission estimates, exposure point concentrations (EPCs) for relevant chemicals were determined by conducting air dispersion modeling. Air modeling was used to approximate ground level concentrations at the point of exposure for each specific receptor scenario.

The chronic non-carcinogenic risks are based on a Hazard Quotient (HQ), which is based on the chronic daily intake of the chemical by the receptor and the potency of the chemical. The sum of all the HQs of chemicals under consideration is called the Hazard Index (HI). The BAAQMD CEQA guidelines recommend a HI threshold of 1.0 for evaluating risks. An HI less than 1.0 indicates that there is not likely to be any adverse health effects from the exposure. An HI greater than 1.0 indicates that there is a potential health hazard for the exposed population. In addition, the BAAQMD CEQA guidelines define a significant risk as one greater than 10 in 1,000,000 (or 10^{-5}).

Risk characterization results for the project site are summarized in Table 3.4-7 and are based on 30 years of exposure.⁵⁶ The 30-year average values were appropriate for calculating long-term human health risks, which are generally based on industry standard of 30 years of exposure rather than short-term exposure levels. Additional details regarding the HRA methodology is provided in Appendix C.

As shown in Table 3.4-7, the HIs under existing, immediate closure, permitted, and project conditions are estimated to be less than 1.0. Therefore, the non-carcinogenic human health hazard from the project to off-site populations is acceptable, as compared to relevant regulatory standards. The total carcinogenic risk under existing, immediate closure, permitted, and project conditions were estimated to be less than 10^{-5} , which is below the BAAQMD threshold. For these reasons, the project would not result in significant health hazards. The health hazard and carcinogenic risk both decrease under project conditions because COPCs are assumed to be emitted from the surface of the landfill. Under project conditions, the landfill surface height is increased, resulting in more dispersion by the time COPCs reach ground-level receptors.

Impact AIR – 3: The proposed project would not result in significant health hazards to nearby receptors. **(Less Than Significant Impact)**

⁵⁵ The EPA describes a complete exposure pathway as generally consisting of four necessary elements: 1) a source and mechanism of chemical release; 2) a retention or transport medium/media; 3) a point of potential human contact with the contaminated medium; and 4) an exposure route at the exposure point.

⁵⁶ A 30-year exposure timeframe is the industry's standard exposure duration for residential exposures.

Table 3.4-7: Summary of Risk Characterization from Chemicals of Potential Concern on Sensitive Receptors								
	Scenario							
	Residential				Commercial Worker			
	Existing Conditions	Immediate Closure Conditions	Permitted Conditions	Project Conditions	Existing Conditions	Immediate Closure Conditions	Permitted Conditions	Project Conditions
Chronic Hazard Index (350 ft radius)	0.34	0.35	0.50	0.50	0.10	0.11	0.15	0.15
Acute Hazard Index (350 ft radius)	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.02
Increased Cancer Risk (350 ft radius)	4.7×10^{-7}	4.8×10^{-7}	6.9×10^{-7}	6.8×10^{-7}	2.2×10^{-7}	2.3×10^{-7}	3.2×10^{-7}	3.2×10^{-7}
Chronic Hazard Index (3,000 ft radius)	0.13	0.14	0.19	0.18	0.04	0.04	0.06	0.06
Acute Hazard Index (3,000 ft radius)	0.006	0.006	0.008	0.01	0.006	0.006	0.008	0.008
Increased Cancer Risk (3,000 ft radius)	2.26×10^{-7}	2.34×10^{-7}	2.94×10^{-7}	2.77×10^{-7}	1.06×10^{-7}	1.10×10^{-7}	1.38×10^{-7}	1.30×10^{-7}
Chronic Hazard Index (Worst Case)	0.34	0.35	0.50	0.50	0.10	0.11	0.15	0.15
Acute Hazard Index (Worst Case)	0.015	0.015	0.021	0.021	0.015	0.015	0.021	0.021
Increased Cancer Risk (Worst Case)	5.03×10^{-7}	5.18×10^{-7}	7.21×10^{-7}	7.03×10^{-7}	2.36×10^{-7}	2.43×10^{-7}	3.39×10^{-7}	3.30×10^{-7}

Odorous Emissions

The nearest residence is located about 0.4 miles from the project site. According to the BAAQMD CEQA Guidelines, a sanitary landfill within one mile of sensitive receptors, such as residences, could result in odor impacts.

While the BAAQMD CEQA Guidelines identifies thresholds for significant odor impacts for placing new receptors near an existing source of odors, no specific thresholds are identified for locating a new source of odor near existing receptors.

As discussed previously, NISL and the Recyclery currently employs several odor control measures (OCMs), including the landfill gas collection and control systems, daily cover, water trucks, odor eliminating additives, meteorological stations, and proper maintenance of windrows. Per the Recyclery's odor control plan (as outlined in the Recyclery's *Report of Station Information*, 1996), all materials including green waste and recyclables are processed within 48 hours of receipt to minimize and avoid odors.

Under the proposed project, the landfill would be expanded vertically, raising its profile. This would result in an increased capacity and increased landfill gas emissions. The raised vertical profile will expose a greater surface area of the landfill to meteorological conditions. As a result, the additional waste and subsequent landfilling activities would be more susceptible to the advection pathway. However, an increase in the vertical profile of the landfill will also result in an increase in the distance which the odors must travel to reach sensitive receptors, as well as a greater air dispersion of emissions before they reach ground level. This would allow further dilution of the odiferous compounds resulting in decrease of the intensity and concentration of the odors.

Although the expansion of the landfill, regarding advection and dilution, would affect the transport of odiferous compounds in an opposite manner, it is more likely that dilution would not sufficiently reduce the concentration of odiferous compounds to undetectable levels. It is probable that the receptors in Milpitas would continue to be affected by the transport of odiferous compounds through advection. The project proposes an Initial Compost Area Line, which delineates the easternmost boundary on the landfill where compost windrows are currently or would foreseeably be located. This Initial Compost Area Line limits the location of compost windrows to the west of the line, farthest from receptors in Milpitas. If, in the future, the compost windrows are proposed east of the Initial Compost Area Line, a PD Permit/Amendment is required with additional environmental review before composting can be moved east of the Initial Compost Area Line. The potential odor impacts of any such proposed relocation shall be assessed using then-current industry standards and the landfill operator shall be required to mitigate odor impacts anticipated from the relocation of compost windrows, in accordance with CEQA, utilizing the best, commercially reasonable, industry management practices.

The project would not affect the implementation of the existing OCMs or Odor Impact Minimization Plan. While the project would allow more waste to be deposited at the landfill, the project would not result in more waste being exposed at once than occurs under existing conditions due to the continued implementation of the OCMs and Odor Impact Minimization Plan (see Appendix F). The proposed project would ~~continue to~~ allow food waste to continue to be processed on the Recyclery property. Since that is not allowed by the existing permits or zoning, disapproval of the project would mean the food waste could not be processed there anymore. Since the Recyclery is the portion of the site closest to residential uses, project approval could be a source of increased odors compared

to project denial. If the project is not approved as proposed, the processing of food waste will have to be eliminated or moved to the composting area on the landfill. The project does not propose to increase its current composting operations.

The proposed project (including the implementation of the Initial Compost Area Line), with the continued implementation of current OCMs and Odor Impact Minimization Plan, would not increase odors compared to existing operations. In addition, if the outdoor food processing area at the Recyclery is enclosed in a building as part of the Nuisance Species Abatement Plan (NSAP, see mitigation measure MM BIO -13.1 in Section 3.6), odors from the project site would be reduced further.

Impact AIR – 4: The proposed project (including the implementation of the Initial Compost Area Line), with the continued implementation of the current OCMs and Odor Impact Minimization Plan, would not increase odors compared to existing operations. **(Less Than Significant Impact)**

3.4.3 Mitigation and Avoidance Measures

As a condition of approval, the project proponent proposes to implement the following mitigation measure to reduce the project's emissions of NO_x and VOCs/POCs/ROGs to a less than significant level:

MM AIR – 1.1: As required by BAAQMD regulations, the project proponent shall be responsible for purchasing NO_x and VOCs/POCs/ROGs offsets for emissions in excess of BAAQMD's threshold of 15 tons per year of NO_x and 15 tons per year of VOCs/POCs/ROGs or obtaining the offsets through BAAQMD's Small Facility Banking Account. Prior to issuance of permits from the BAAQMD for the proposed landfill expansion or additional equipment (*e.g.*, expansion of the GRS facility), the project proponent shall be required to purchase emission offsets based on projected project emissions. The offsets are a one time only purchase.

3.4.4 Conclusion

Impact AIR – 1: The project, in compliance with BAAQMD regulations with the implementation of MM – AIR 1.1 above, would not result in significant levels of CAP emissions. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact AIR – 2: The project would not result in significant ground level carbon monoxide concentrations. **(Less Than Significant Impact)**

Impact AIR – 3: The proposed project would not result in significant health hazards to nearby receptors. **(Less Than Significant Impact)**

Impact AIR – 4: The proposed project (including the implementation of the Initial Compost Area Line), with the continued implementation of the current OCMs and Odor Impact Minimization Plan, would not increase odors compared to existing operations. **(Less Than Significant Impact)**

3.5 NOISE

3.5.1 Setting

3.5.1.1 *Background Information*

Several factors influence sound as it is perceived by the human ear, including the actual level of sound, the period of exposure to the sound, the frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a “decibel” (dB) scale which serves as an index of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the “A-weighted” decibel or dBA. Further, sound is averaged over time and penalties are added to the average for noise that is generated during times that may be more disturbing to sensitive uses such as early morning, or late evening.

Since excessive noise levels can adversely affect human activities (such as conversation and sleeping) and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods such as L_{eq} , DNL, or CNEL.⁵⁷ Using one of these descriptors is a way for a location’s overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (*e.g.*, when a jet is taking off from Norman Y. Mineta San José International Airport or a leafblower is operating) and specific moments when noise levels are lower (*e.g.*, during lulls in traffic flows on I-880 or in the middle of the night). For this report, the DNL will be used as it is consistent with the guidelines for the City of San José and the State of California.

3.5.1.2 *Existing Conditions*

The most important noise related characteristics of the project site are its size and its isolation. While located at the nexus of three cities and two urban counties, there is little proximate development. Most of the site boundaries are shared with the Refuge and the WPCP.

The ground level of the project site is relatively quiet, with the primary noise sources being an intermittent (though sometimes a constant) stream of haul vehicles delivering or hauling waste, and process vehicles and equipment screening material, moving waste, compacting waste, watering and turning the windrows. The primary noise sources at the working face of the landfill include haul vehicles delivering waste, large equipment moving and compacting waste, and the pyrotechnics used to disperse gulls. On the eastern part of the site, the prevailing noise is from I-880 and trucks entering the site. Even when multiple pieces of equipment are operating on-site, the noise is not specifically noticeable off-site due to the relatively constant flow of vehicles on I-880. NISL is currently permitted to operate for 24 hours per day, Monday through Saturday. According to the landfill operator, this allows flexibility for the landfill operator to adjust receiving hours as needed,

⁵⁷ L_{eq} stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. **DNL** stands for Day-Night Level and is a 24-hour average of noise levels, with 10 dB penalties applied to noise occurring between 10:00 PM and 7:00 AM. **CNEL** stands for Community Noise Equivalent Level; it is similar to the DNL except that there is an additional five (5) dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM. Generally, where traffic noise predominates, the CNEL and DNL are typically within two (2) dBA of the peak-hour L_{eq} .

based on demand.⁵⁸ Currently, the operation hours for the landfill and Recyclery are 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday. The landfill is closed on Sundays, Thanksgiving, Christmas, and New Year's Day.

The City's General Plan includes acceptable noise levels for a variety of uses including public, residential, commercial, industrial, and agricultural uses. The satisfactory noise level for industrial uses (such as the landfill and Recyclery) is 70 dBA DNL or lower. The largest single noise source is the electric generator at the gas recovery facility, which is currently located approximately 2,800 feet west of the entrance. It is audible on the WPCP property. According to measurements taken in June 2008 at the intersection of Dixon Landing Road and McCarthy Boulevard, the noise levels ranged from less than 55 dBA DNL to less than 70 dBA DNL.⁵⁹ The existing average daily noise levels at the project site are consistent with the City's General Plan noise standards for the existing land uses on-site.

The nearest sensitive land use is a residential complex located approximately 0.4 miles east of the project site, east of I-880 and south of Dixon Landing Road (refer to Figure 1.0-3). The landfill noise is not perceptible at the residential property due to the intervening freeway interchange, and complaints have not been received from local residents regarding noise problems. The existing San Francisco Bay Trail comes to within approximately 0.2 miles of the outer levee of Newby Island. Equipment operating on the landfill is visible to users of the San Francisco Bay Trail, and the equipment noise may be audible sometimes.

3.5.2 Noise Impacts

3.5.2.1 *Thresholds of Significance*

For the purposes of this project, a noise impact is considered significant if the project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

⁵⁸ Gambelin, Donald. Email from Allied Waste. "Re: Newby – hours of operation." 20 May 2009.

⁵⁹ City of Fremont. Draft EIR for the Creekside Landing Project (SCH# 2008042116). 8 October 2008.

3.5.2.2 Discussion of Impacts

The proposed project would increase the maximum permitted elevation of the landfill from 150 to 245 feet (NGVD29). This proposed increase in elevation will increase the capacity of the landfill by approximately 15.12 million cubic yards. The project proposes other physical changes across the site including relocation of existing uses, possible construction of permanent buildings to replace the office trailers, and implementation of operational or physical changes necessary to comply with existing and new regulations (refer to **Section 1.0 Description of the Proposed Project** for more detail).

Relocation and Construction Activities

The relocation or construction of new buildings would generate short-term construction noise impacts. Typical hourly average construction generated noise levels are about 81 to 88 dBA measured at a distance of 50 feet from construction activities. Operational and/or physical changes necessary to comply with existing and new regulations could result in an incremental increase in noise levels on the site. Specific future operational and/or physical changes are unknown at this time; however, there are no sensitive land uses (*e.g.*, residences, parks) adjacent to the site.

While there would be a temporary increase in noise from construction on the project site, it is anticipated that the noise levels from the proposed project site would not be distinguishable from the existing noise generated by I-880, which is located closer to the sensitive land uses (*i.e.*, the residences located to the east of I-880) than the project site.

A discussion of impacts from the landfill's operation and construction activities to biological resources is discussed separately in **Section 3.6 Biological Resources** of this EIR.

Impact NOI – 1: Relocation and construction activities on the project site would not result in substantial noise increases at existing sensitive land uses (*i.e.*, the residences located east of I-880). (**Less Than Significant Impact**)

Project-Generated Traffic Noise

For traffic noise to increase noticeably (*i.e.*, a minimum of three dB increase to be detectable to the human ear), existing traffic volumes must double. The project does not propose to increase the existing number of hauling vehicle traffic that have been generated by the project site and therefore, the project would not increase the traffic above existing levels. However, without the proposed project, the existing daily traffic volumes to the project site would be reduced because, if the landfill were to continue operating as is, it would reach capacity in 2016 and close. There would be little, if any traffic trips to the project site after it closes. Alternatively, without the proposed project, the landfill could reduce incoming wastes (*i.e.*, truck traffic) to just contractual amounts and the non-contractual waste would have to be delivered elsewhere. Under these two possible scenarios, the landfill operations without the approval of the proposed project would have either the same existing amount of traffic trips for a shorter period of time (*i.e.*, until 2016) or fewer traffic trips for generally the same amount of time as the proposed project.⁶⁰ While the proposed project would result in project-generated traffic noise for a longer timeframe, the noise generated on a daily basis from the

⁶⁰ While the estimated post-closure date for the landfill is 2025 with or without the project, the City has no control over when the landfill closes. Landfill operations would continue as long as capacity remains. Therefore, if by 2025, capacity remains at the landfill, it could continue to operate.

proposed project does not constitute a significant impact at a sensitive receptor (*i.e.*, a minimum increase of three dB to be detectable by the human ear). For this reason, the proposed project would not result in a significant impact from site-generated traffic noise.

A corporation yard is not a permitted use under the site's existing zoning, but combined activities that would constitute a corporation yard are existing on the site. In the Final EIR prepared by the City of San José in May 2002, the introduction of a corporation yard onto the D-shaped area was evaluated. The noise impacts of placing the yard at that location were found to be less than significant.⁶¹ (Because hauling vehicles do not leave after dumping their last load, placing the corporation yard at the landfill results in a slight decrease in vehicle traffic and associated noise.)

Impact NOI – 2: The project would not result in significant traffic noise impacts. **(Less Than Significant Impact)**

Operational Noise and Vibration

As described above, NISL is permitted to operate 24 hours a day. The current hours of operation for the landfill and Recyclery are 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday. Presently, the landfill operator does not foresee any change to operating hours.⁶² As discussed previously, a PD Permit and subsequent CEQA review will be required if the landfill operator wishes to shorten the existing operating hours. It is not anticipated that shortening the operating hours would result in significant noise impacts because there are no sensitive land uses (such as residences) that would be adversely impacted. As discussed in **Section 3.6 Biological Resources**, wildlife species would not be significantly affected by the change in operating hours.

Individually significant noise generators have not been identified as part of any changes proposed, although the overall amount of activity from uses that are not currently permitted on the site, such as the corporation yard – including vehicular movements such as trucks being dispatched or bins being moved on-site, increase ambient noise levels incrementally. However, noise levels in the project area, including the noise level at the San Francisco Bay Trail, are not anticipated to substantially increase. As the landfill height is increased, the distance between users of the trail and equipment on the landfill will increase, incrementally reducing the noise level. The increased height will reduce the noise levels perceived at existing ground level outside the levees.

The existing levee and setback from the riparian corridor will minimize noise intrusion into the riparian corridor. Impacts to wildlife species due to operational noise is discussed in **Section 3.6 Biological Resources** of this EIR.

In addition, as part of the project, no new activities that would generate substantially greater noise or vibration compared to existing conditions would be allowed within the 700 feet of California clapper rail nesting habitat in Coyote Creek, South Coyote Slough, or associated tidal marsh habitats to the south, west, and north portions of the project site. This 700 foot buffer is shown on Figure 1.0-9. This buffer prevents exposing wildlife in the habitat adjacent to the project site to substantially greater noise and vibration compared to existing conditions. Since other properties in the project site vicinity (such as the Creekside Landing property which is currently vacant) are located further from

⁶¹ City of San José. Final Environmental Impact Report for the Newby Island General Plan Amendments and Planned Development Rezoning. May 2002.

⁶² Gambelin, Donald. Email from Allied Waste. "Re: Newby – hours of operation." 20 May 2009.

the project site than the habitat, noise and vibration at those properties from the project site would be similar or less than existing noise and vibration levels.

Without the proposed project, the operational noise at the project site would likely cease sooner if the landfill continues operating as is and reaches capacity in 2016, or incrementally decrease if the amount of waste received is limited to only contractual amounts and non-contractual wastes are delivered elsewhere and the landfill would operate for a longer period of time. With the proposed project, operational noise impacts would continue until capacity is reached, which is estimated to be in 2025 but could be longer. While the proposed project would result in operational noise for a longer timeframe, the noise generated on a daily basis would remain the same as under existing conditions, which is consistent with the General Plan acceptable daily noise level for industrial uses. Therefore, the proposed project would not result in significant new operational noise impacts.

Impact NOI – 3: The proposed project would not result in significant new operational noise or vibration impacts **(Less Than Significant Impact)**

3.5.3 Mitigation and Avoidance Measures

No mitigation or avoidance measures are required.

3.5.4 Conclusion

Impact NOI – 1: Relocation and construction activities on the project site would not result in substantial noise increases at existing sensitive land uses (*i.e.*, the residences located east of I-880). **(Less Than Significant Impact)**

Impact NOI – 2: The project would not result in significant traffic noise impacts. **(Less Than Significant Impact)**

Impact NOI – 3: The proposed project would not result in significant new operational noise impacts. **(Less Than Significant Impact)**

3.6 BIOLOGICAL RESOURCES

The following discussion is based on a biological resources report completed by *H.T. Harvey & Associates* in September 2009. A copy of this report is included in Appendix D of this EIR. Refer to the report in the appendix for additional detail and data sources and citations. The referenced gull survey reports completed by the San Francisco Bay Bird Observatory (SFBBO, January and April 2009) for Allied Waste are also included in Appendix D.

3.6.1 Setting

The project site is bounded by Coyote Creek east of the project site; the San Francisco Bay National Wildlife Refuge and wetlands associated with Coyote Creek, the Fremont Lagoons tidal restoration area, and South Coyote Slough south, west, and northwest of the project site; and the Santa Clara Valley Water District's (SCVWD's) Reach 1A waterbird pond and salt marsh harvest mouse habitat restoration area southeast of the project site. The biosolids lagoons of the WPCP and Salt Pond A18 are located a bit farther south and southwest of the project site, and former salt pond A19, which is being restored to tidal habitats by the SCVWD as part of the South Bay Salt Ponds project, is west of the project site (see Figure 1.0-3). Lands farther north and northeast are developed, or are currently being developed, for commercial/light industrial uses.

The National Wetland Inventory (NWI) depicts numerous wetland types surrounding the project site and 12 wetland features are mapped by NWI within the landfill footprint. Historically, soils underlying the project site include made land, tidal marsh, Alviso clay, and Campbell silty clay loam, and clay substratum. Most of the site has been manipulated extensively subsequent to the historic soil surveys reflected in the NWI, therefore, most of the site currently consists of a mix of fill materials.⁶³ Refer to Appendix D of this EIR for additional details about the wetland types and features and on-site soils.

3.6.1.1 *Biotic Habitats*

A reconnaissance-level survey for botanically sensitive habitats and habitats for special-status plants and animals was completed for the project. The following habitats/land use types occur on the project site: landfill/ruderal, developed, tidal brackish marsh (within wetland areas adjacent to the landfill), and aquatic (in the landfill retention basins). These biotic habitats and associated vegetation and wildlife are described below.

Landfill/Ruderal

Vegetation. Most of the project site consists of landfill/ruderal habitat. Ruderal communities consist of plants that thrive in disturbed areas, and weedy, non-native annual forbs and grasses are typically the first species to colonize these sites following disturbance. Anthropogenic disturbance is constantly occurring on the landfill as new waste is buried, but most of the landfill is covered with ruderal vegetation that has been seeded to stabilize the landfill's surface in areas where waste is not being actively buried at this time. Ruderal species observed on the project site include rigput brome, black mustard, and prickly ox-tongue. Ruderal vegetation within the vegetated areas of the landfill is relatively low (two to three feet tall) and covers inactive areas of the landfill in a fairly uniform

⁶³ References to "fill materials" in this section are to the landfilled waste and cover materials that make up the body of the landfill. Fill is a general term referring to imported materials brought onto a site that changes its elevation and character.

fashion, since grass species predominate. Active areas of the landfill, including access roads, are maintained and contain more patchy, low-statured ruderal vegetation. Along the periphery of the landfill, mustard species grow taller (approximately five feet tall) in areas as thick, impenetrable thickets (north of the D-shaped area) while in other areas this vegetation is sparse or absent. On the northern boundary of the D-shaped area, some native shrub species, including coyote brush, also occur within ruderal mustard patches before transitioning into tidal brackish marsh habitat on the outboard side of the berm.

Wildlife. The slopes on the sides of the landfill are vegetated and are less disturbed than the active landfill area. As a result, several wildlife species associated with ruderal habitats occur on the landfill's vegetated slopes, including common ravens, American crows, and red-tailed hawks. Other species likely using the ruderal vegetation include the western fence lizard, California ground squirrel, and California vole. Birds such as the house finch, white-tailed kite, loggerhead shrike, and northern harrier forage in ruderal grassy areas of the landfill. Western meadowlarks and Bryant's savannah sparrows likely nest in undisturbed ruderal vegetation.

The disturbed area of the landfill, where trash is actively dumped and buried, attracts thousands of gulls in winter months, including California gulls, herring gulls, Thayer's gulls, ring-billed gulls, western gulls, glaucous-winged gulls, and other species that forage on the refuse at the active landfill area. Gull numbers are substantially lower in summer, but thousands of California gulls, which breed in the South Bay, use the landfill throughout the summer. During reconnaissance-level surveys in March 2008, approximately 4,000 gulls (40 percent of which were California gulls) were observed foraging and roosting in the active portion on the landfill, despite the use of pyrotechnics designed to dissuade gulls on the site.

Previous gull counts conducted in 2006 by San Francisco Bay Bird Observatory (SFBBO) and U.S. Geologic Survey (USGS) indicate that California gulls are the most numerous gull species between April and August. The average number of California gulls at Newby Island during recent survey counts was 3,877 gulls in 2006, and in 2007 the high count of California gulls was 3,612 in February. The average abundance of California gulls at Newby Island at any given time during survey counts (3,877 gulls) is substantially more than at Tri-Cities landfill (1,738) and at Palo Alto's landfill (49). These counts represent the highest number of individuals observed at any one time. However, observations of gulls here and elsewhere in the South Bay over the years by *H.T. Harvey & Associates* show a high rate of turnover, with gulls constantly moving in and out of the landfill during the day. As a result, the number of different individuals using the landfill in a given day is substantially higher than the maximum number recorded at a given time.

Other high counts of gulls at Newby Island have included 33,000 (including 8,000 California gulls) in December 2008 and 24,000 (including 8,000 California gulls) in February 1998. Other gull species observed in high numbers at Newby Island include herring gulls (9,000 in December 1997, 24,000 in December 1998, 20,000 in March 2000), western gulls (200 in February 1997, 400 in December 1998), glaucous-winged gulls (300 in December 1997, 800 in February 1998), and Thayer's gulls (300 in December 1997, 350 in February 1998). High gull counts recorded prior to the reduction in waste accepted at closure of the Tri-Cities Landfill in Fremont in 2007 (when it was closed to the public) were likely the result of the availability of food at, and the proximity of, both landfills simultaneously, as gulls were frequently observed moving between the two landfills prior to 2007. Note that while Tri-Cities Landfill has been closed to the public, it has not fully closed and still accepts a small amount of waste.

In June 2008, a focused effort to reduce numbers of gulls at the landfill was initiated using multiple abatement techniques by an abatement specialist. The gull abatement program included a combination of pyrotechnics, trained falcons, propane cannons, and paintball guns implemented by abatement specialists. SFBBO conducted gull surveys to monitor the program's effectiveness in reducing numbers of breeding California gulls and wintering gulls using the landfill.

SFBBO counted gulls within three different landfill areas: the active disposal area/working face, the recent disposal area (where refuse had recently been dumped and covered with a thin layer of soil), and the non-disposal area (which consisted of other areas of the site). SFBBO also made behavior observations; counted gulls on neighboring ponds A18 and A19; and conducted surveys to determine the responses of gulls to specific abatement events. Gull surveys were conducted between 26 February 2007 and 31 December 2008, encompassing periods both before and after intensive abatement began, to determine the effectiveness of gull abatement efforts.

SFBBO recorded a total of 549,668 observations of gulls using NISL during 369 surveys between 26 February 2007 and 31 December 2008, representing a mean of nearly 1,500 gulls per survey. However, the number of gulls using the landfill was significantly lower after the initiation of gull abatement activities than during the same month in 2007, prior to the implementation of the abatement program. For example, mean numbers of gulls per survey observed on the ground during the summer months, when most gulls using the landfill are locally breeding California gulls, declined from about 900, 1,000, and 1,250 in June, July, and August 2007 to 250-300 during each of those months in 2008. During the fall and early winter month, when several species of gulls use the landfill, mean counts of gulls on the ground per survey ranged from about 1,600 to 3,200 in 2007, but remained below 500 in 2008, after the gull abatement program was initiated.

The abatement specialist worked on the site from June 2008 through January 2009. Since the beginning of 2009, the landfill operator has taken over the abatement program from the abatement specialist. Therefore, the program no longer consists of using falcons and dogs to deter birds from the landfill. The landfill operator has hired SFBBO to monitor the success of the current program. These gull surveys have continued to the present, according to Allied Waste. The February 2009 data from SFBBO's April 2009 Interim Report (included in Appendix D) indicate that landfill operator's current program (2009) is more effective than its former (2007 and 2008) program, though such a difference is not apparent in the March data. In short, data from a longer timeframe would be needed to demonstrate the effectiveness of the landfill operator's current program versus the abatement specialist's program.

Flocking species such as European starlings, Brewer's blackbirds, and brown-headed cowbirds also forage in and around the active area of the landfill. Turkey vultures, black-crowned night herons, and common ravens forage at the active face of the Newby Island Landfill as well. Nuisance mammal species such as Norway rats, raccoons, and feral cats typically feed on discarded food and other waste at landfill sites, especially at night when these animals are most active.

Developed

Vegetation. A combination of developed areas (with some planted, ornamental vegetation), bare ground, hardscape, compacted gravel, stockpiled waste disposal and recycling equipment, and piles of recyclable materials occupy large areas of the project site. Most of the developed areas are included in the D-shaped area, the Recyclery, and roads leading to the portions of the landfill that are in active use. The landfill gas flare is also within the developed area of the site. The D-shaped area

is lined with ornamental trees, as is the area east of the Recyclery and along the main entrance road to the active landfill, including the area adjacent to the scales. These areas are landscaped with such ornamental species as pine trees, palm trees, cypress trees, and oleander, among others, which are the only trees on the project site. Many of these trees appear to be of ordinance size.⁶⁴ A large area of compacted fill hardscape (*i.e.*, the C&D area) is being used to store and process a variety of raw fill material (not refuse) and recyclable building materials (*i.e.*, asphalt, concrete, wood). This area is leveled and sprayed with water on a continual basis, and is devoid of vegetation.

Wildlife. Relatively few wildlife species can tolerate the intensive disturbance that occurs within the developed areas on the project site. However, gulls regularly forage on food waste in temporary outdoor storage “piles” at the Recyclery and roost on the Recyclery roof during the day, particularly in the non-breeding seasons. European starlings, Brewer’s blackbirds, and American crows also forage in these areas.

A few bird species including the native house finch, mourning dove, and house sparrow likely nest in and around the structures on the site. The high level of human activity associated with this site likely precludes nesting by raptors in the relatively small ornamental trees on the site.

Several introduced species are expected to be attracted by the food waste at the Recyclery. These include house mice and Norway rats, feral cats, Virginia opossums, and red foxes. Native mammals such as striped skunks and raccoons also forage here. In addition to the available food resources at this site, piles of recyclable materials provide cover for some of these species. Most of these animals are nocturnal, and therefore, the high levels of on-site activity during landfill business hours is not expected to preclude their scavenging at the site at night.

Tidal Brackish Marsh

Vegetation. Tidal brackish marsh habitat is located adjacent to all areas of the project site. Most of these areas surrounding the landfill (along South Coyote Slough, within Coyote Creek, and west of the landfill) are dominated by California bulrush and tule, forming thick, impenetrable marsh habitat. These areas transition into ruderal grassland habitat on the landfill side of the marsh. North of the D-shaped area, cattail dominates more freshwater areas, although sparse pickleweed and alkali heath, which are typical of more saline habitats, also occur. Finally, areas adjacent to the bulrush habitat on the north side of the landfill are dominated by pickleweed, with patches of rabbitsfoot grass, saltgrass, and spearscale. Some areas of bare soil, open water, and channels (*e.g.*, in South Coyote Slough and Coyote Creek) are also present in this habitat type.

Wildlife. The Alameda song sparrow, marsh wren, and San Francisco common yellowthroat forage and breed in this brackish tidal habitat. Common yellowthroats in particular are more restricted to brackish marshes, whereas marsh wrens can utilize a wider variety of wetland types. California clapper rails have been recorded in salt/brackish transitional marshes and several brackish, alkali bulrush-dominated marshes bordering Coyote Creek and South Coyote Slough. Waders such as the black-crowned night-heron, snowy egret, and great egret forage in tidal brackish marshes, and a breeding colony of these large waders ~~formerly occurred~~ occurs north of the landfill, in the adjacent Coyote Creek Lagoon, although ~~The current status~~ size of this colony is unknown since it is difficult to access for surveys. Raptors such as the white-tailed kite and northern harrier nest and

⁶⁴ Per the City of San José Municipal Code, an ordinance size tree is any live or dead woody perennial plant having a main stem or trunk 56 inches or more in circumference (or 18 inches in diameter) at a height measured two feet above natural grade.

forage in and around these marshes. A number of waterbird species forage within this habitat and shorebirds such as American avocets and willets were observed foraging at the edge of the tidal marsh channels during the reconnaissance-level surveys. Dabbling ducks such as mallards and gadwall frequently forage in tidal channels and nest in higher-elevation marshes, especially where marshes transition to grasslands.

These brackish marshes provide some pickleweed habitat for the federally endangered salt marsh harvest mouse, which is known to occur southeast of the site. Other mammals expected in this habitat include the California vole, western harvest mouse, house mouse, and saltmarsh wandering shrew.

Gopher snakes, garter snakes, and Pacific treefrogs occur in the upper portions of these marshes. A number of fish species occur in the Coyote Creek channel. Central California Coast steelhead and fall-run Chinook salmon occur in this reach of Coyote Creek during migration to and from spawning areas upstream. Other fish that may occur in Coyote Creek and South Coyote Slough adjacent to the site include staghorn sculpin, starry flounder, and non-native species such as largemouth bass, green sunfish, and bluegill.

Aquatic

Vegetation. The main stormwater retention pond and one compost stormwater retention pond are located centrally near the southern boundary of the landfill. A second compost stormwater retention basin is located near the western boundary of the landfill. Stormwater runoff from the windrow areas is conveyed via drainage swales and ditches to adjacent compost stormwater retention ponds. The runoff from the compost runoff retention ponds is used to water the compost windrows or for dust control on the compost windrow pads. Stormwater from the C&D area flows to the main stormwater retention pond where it is allowed to settle before it is discharged to South Coyote Slough. Runoff from the D-shaped area, Recyclery and greenwaste grinding area is conveyed via vegetated swales to the main stormwater retention pond then discharged into South Coyote Slough. These three basins collect runoff from the surface of the landfill, which is probably very low water quality. No wetland vegetation or hydrophytic vegetation was observed within these retention basins.

Wildlife. Due to the small size of these basins and their proximity to intensive disturbance at the landfill, few waterbirds other than gulls, which bathe and roost in these basins, are expected to occur in this habitat in large numbers. Small numbers of shorebirds such as the killdeer, greater yellowlegs, and black-necked stilt, and dabbling ducks such as the mallard and gadwall, are likely to forage here occasionally when nearby human activity levels are low.

3.6.1.2 *Special-Status Species and Sensitive Habitats*

Applicable Regulations

Biological resources are regulated by the following:

Federal Endangered Species Act. The Federal Endangered Species Act (FESA) protects listed wildlife species from harm or “take” which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. A take can also include habitat modification or degradation that directly results in death or injury to members of a listed wildlife species. An activity can be defined as “take” even if it is unintentional or accidental. Listed

plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands or if the project requires a federal action, such as a Section 404 fill permit.

California Endangered Species Act. The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, CDFG has jurisdiction over state-listed species (California Fish and Game Code 2070). Additionally, the CDFG maintains lists of “species of special concern” that are defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

Clean Water Act. Under Section 404 of the Clean Water Act, the Corps is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and, depending on the circumstances, may also be subject to Corps jurisdiction.

California Water Quality Programs. Pursuant to Section 401 of the federal Clean Water Act, projects that are regulated by the Corps must obtain water quality certification from the RWQCB. This certification ensures that the project will uphold state water quality standards. The RWQCB may impose mitigation requirements even if the Corps does not.

The Porter Cologne Act (Section 13240). The Porter Cologne Act authorizes the Water Board to develop a Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) which is the Water Board’s master water quality control planning document. It designates Beneficial Uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required.

The Basin Plan identifies the following Beneficial Uses for the San Francisco Bay, Santa Clara Basin, South Bay Basin, and Lower San Francisco Bay. Because habitats in the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) are hydrologically connected to San Francisco Bay, these Beneficial Uses also apply to the Refuge, which abuts the NISL: ocean, commercial, and sport fishing; estuarine habitat; industrial service supply; fish migration; navigation; preservation of rare and endangered species; contact water recreation; non-contact water recreation; shellfish harvesting; fish spawning; and wildlife habitat.

Federal Migratory Bird Treaty Act. The Federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703) (MBTA) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

California Fish and Game Code. The California Fish and Game (CDFG) Code includes regulations governing the use of, or impacts to, many of the state’s fish, wildlife, and sensitive habitats. The CDFG exerts jurisdiction over the bed and banks of rivers, lakes, and streams according to §1601-1603 of the CDFG Code. The CDFG Code requires a Streambed Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body and for the removal of riparian vegetation.

Certain sections of the CDFG Code describe regulations pertaining to certain wildlife species. For example, CDFG Code §3503, 2513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by the CDFG. Raptors (*i.e.*, eagles, hawks, and owls) and their nests are specifically protected in California under CDFG Code §3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” CDFG Code §4150 protects non-game mammals, and other sections of the Code protect other taxa.

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of plant species of concern in California. Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA’s Section 15380 criteria and adverse effects to these species may be considered significant.

Special-Status Plant Species

Reconnaissance-level surveys were completed for habitats capable of supporting special-status plant species. Prior to the site surveys, information concerning the known distribution of threatened, endangered, or other special-status plant species with potential to occur in the area was collected from several sources and reviewed. These sources included the CDFG’s Natural Diversity Database and information available through the USFWS, CDFG, and technical publications. The CNPS’s Inventory of Rare and Endangered Vascular Plants of California and The Jepson Manual supplied information regarding the distribution and habitats of vascular plants in the vicinity.

Many of the special-status plant species that occur in Santa Clara County are associated with habitat or soil types that did not occur on the project site historically, or no longer occur on the project site due to the extensive removal of soil and addition of fill material. Such habitats and soil types that are absent from the project site include serpentine soils, clay soils, vernal pool habitat, and cismontane woodland habitat. Additionally, many of the species identified as potentially occurring in the area occur at much higher elevations than are present at the project site. The only native habitat remaining on the site is outside of any potential impact area and occurs at approximately sea level.

Based on the database searches, a total of 48 special-status species could possibly occur on the project site. Due to the degraded nature of habitat on the project site, the lack of associated native species, and/or the absence of specific microhabitat variables such as soil type, elevation, or hydrology and based on site reconnaissance surveys, all 48 species were considered absent from the site and unlikely to occur within degraded areas immediately adjacent to the project site (refer to Appendix D for more detail). Therefore, no further surveys for special-status plant species are required.

Special-Status Wildlife Species

Surveys were completed on the project site for habitats capable of supporting special-status wildlife species. Prior to the site surveys, information concerning the known distribution of threatened, endangered, or other special-status wildlife species with potential to occur in the area was collected from multiple sources and reviewed. The sources included the CDFG’s Natural Diversity Database

list of special-status species on the USFWS website, CNDDDB, and previous surveys completed by *H.T. Harvey & Associates* for special-status species in the site vicinity.

The project site is outside the known range of, or lacks suitable habitat for, several special-status species that occur elsewhere in the region, including the California red-legged frog, California tiger salamander, and San Francisco dusky footed woodrat. Several special-status wildlife species, including the California black rail, California least tern, and western snowy plover, may forage near the site, but are extremely unlikely to occur on the site itself, and would not breed close enough to the site to be disturbed by the proposed project. Other special-status species may occur on or immediately adjacent to the project site only as uncommon to rare visitors, migrants, or transients, but they are not expected to breed on the site or to use the site in large numbers. These include the American peregrine falcon, short-eared owl, yellow warbler, and hoary bat.

Special-status species for which suitable breeding habitat is present on or immediately adjacent to the site include the white-tailed kite, northern harrier, California clapper rail, burrowing owl, loggerhead shrike, San Francisco common yellowthroat, Alameda song sparrow, Bryant's savannah sparrow, salt marsh harvest mouse, and salt marsh wandering shrew. The Central California Coast steelhead and fall-run Chinook salmon occur in Coyote Creek immediately adjacent to the site. These species are discussed below.

Federal or State Endangered or Threatened Species

Central California Coast Steelhead – the steelhead is an anadromous form of rainbow trout that migrates upstream from the ocean to spawn. Steelhead are known to occur in several stream systems in the South San Francisco Bay Area, including the Coyote Creek watershed. Suitable spawning habitat is not located in or near the reach of Coyote Creek near the Newby Island Landfill, but this species moves through sloughs between the bay and spawning streams (*e.g.*, Coyote Creek/Slough), and steelhead are present in the reach of Coyote Creek adjacent to the project site during migration.

California Clapper Rail – the California clapper rail is a marsh bird currently endemic to the marshes of San Francisco Bay. Although clapper rails are typically found in tidal salt marshes, they have also been documented in brackish marshes in the South Bay. Although habitat on most of the Newby Island Landfill is not suitable for clapper rails due to the absence of marsh habitats within the site, there is suitable habitat immediately adjacent to (and barely extending up onto) the project site in Coyote Creek and South Coyote Slough. Surveys completed during the 1990 breeding season and winter season revealed a number of California clapper rails occupying salt/brackish transitional marshes and several brackish, alkali bulrush-dominated marshes bordering Coyote Creek and South Coyote Slough. All these rails were in the broader marshes south and west of the western portion of the landfill.

Incidental observations of California clapper rails in South Coyote Slough by *H. T. Harvey & Associates* confirm the presence of the species in this area, at least occasionally, during the 1990s. In contrast, focused surveys of these marshes in 1989 and 2006 did not detect any clapper rails. Therefore, although the species uses these marshes, their occurrence and abundance may fluctuate.

Salt Marsh Harvest Mouse – the salt marsh harvest mouse is found only in saline wetlands of San Francisco Bay and its tributaries. Although habitat within most of the project area is not suitable for salt marsh harvest mice due to the absence of pickleweed and bulrush-dominated marsh, there is suitable habitat in areas immediately adjacent to (and barely extending up onto) the project site. Salt

marsh harvest mice have been captured east of Coyote Creek and north of Dixon Landing Road, east of the landfill, and southeast of the landfill.

California Species of Special Concern

Chinook Salmon – the Chinook salmon is an anadromous salmonid. Chinook salmon did not historically spawn in streams flowing into South San Francisco Bay. Since the mid-1980s, however, small numbers of fall-run Chinook salmon, probably strays from Central Valley runs, have been found in several such streams, including Coyote Creek, Los Gatos Creek, and the Guadalupe River. Suitable spawning habitat is not located in or near the reach of Coyote Creek near the Newby Island Landfill, but this species moves through sloughs between the bay and spawning streams (e.g., Coyote Creek/Slough), and Chinook are present in the reach of Coyote Creek adjacent to the project site during migration. In at least some areas, juvenile Chinook make heavy use of estuarine habitats as well, and if the species spawns successfully in Coyote Creek (which has not been well documented), juveniles could forage in the reach near the project site.

Northern Harrier – the northern harrier is a raptor commonly found in open grasslands, agricultural areas, and marshes. This species is a common forager over San Francisco Bay marshes and extensive areas of ruderal habitat immediately surrounding the bay, particularly during the non-breeding season when migrant and wintering birds augment the local resident population. Harriers are not expected to nest on the Newby Island Landfill site since the site does not include extensive marshes, but it could breed in marshes immediately adjacent to the site. Harriers forage on the landfill.

Burrowing Owl – the burrowing owl is a small, terrestrial owl of open country. No evidence of burrowing owls or California ground squirrels were observed on the site during the reconnaissance-level surveys conducted for the project. However, no focused surveys were completed, and the ruderal portions of the project site would be suitable for burrowing owls if ground squirrels are present. This species is known to occur in some numbers in the grasslands and ruderal habitats approximately two miles south and southeast of the site, and therefore burrowing owls may occur on the site as occasional foragers, or as breeders in the ruderal grassy areas that have been undisturbed.

Loggerhead Shrike – the loggerhead shrike is a predatory songbird that prefers open habitats interspersed with shrubs, trees, poles, fences, or other perches from which it can hunt. Loggerhead shrikes are known to breed in the project vicinity, and thus may forage in the ruderal habitats on the Newby Island site; and they could potentially nest in ornamental trees on the site~~could provide potential nesting sites for the species.~~ At most, two or three pairs would be expected to breed on the site due to the paucity of trees and shrubs.

San Francisco Common Yellowthroat – the San Francisco common yellowthroat inhabits emergent vegetation and breeds in fresh and brackish marshes and associated upland areas in the San Francisco Bay Area. In the South Bay, this species is a fairly common breeder in such habitats virtually wherever they occur, although very small patches of marsh often lack this species. It occurs in fairly large numbers in brackish marsh habitats along Coyote Creek and South Coyote Slough adjacent to, and just barely extending onto, the project site.

Alameda Song Sparrow – the Alameda song sparrow is one of three subspecies of song sparrow breeding only in salt marsh habitats in the San Francisco Bay area. Song sparrows are fairly common breeders in tidal marsh areas adjacent to (and barely extending up onto) the project site.

The location of the interface between populations of the Alameda song sparrow and those of the race breeding in freshwater habitats in the vicinity of the project area is not well known due to difficulties in distinguishing individuals of these two races in the field. However, given that some salt marsh plant species are present on and adjacent to the site, it can be assumed that some, if not ~~or~~ all of the song sparrows breeding on the project site represent pusillula unless they can be examined in the hand.

Bryant's Savannah Sparrow – Bryant's savannah sparrow is one of approximately 17 subspecies of savannah sparrows in North America. In the south bay, Bryant's savannah sparrow is a fairly common breeder in high-marsh habitats dominated by pickleweed, saltgrass, and other short-statured vegetation. It also breeds in grasslands adjacent to salt marshes, and in more upland grasslands in hills surrounding the South Bay. The ruderal grassy areas within the less frequently disturbed portions of the landfill, as well as adjacent pickleweed tidal marshes, provide potential nesting habitat, and Bryant's savannah sparrows may forage throughout the project site. However, due to the ongoing landfill disturbance, the numbers breeding on the site are likely low.

Salt Marsh Wandering Shrew – formerly more widely distributed in the Bay Area, this small insectivorous mammal is now confined to salt marshes of the South Bay. This subspecies was formerly recorded from marshes of San Pablo and San Francisco bays in Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara counties, but captures in recent decades have been very infrequent anywhere in these areas. Shrews are occasionally captured during salt marsh harvest mouse trapping studies, but the difficulty in identifying them to species has precluded a better understanding of the current distribution of this species in the South Bay. It is unknown whether the salt marsh wandering shrew occurs in marshes adjacent to the site, but it could be present in pickleweed-dominated habitats where salt marsh harvest mice occur.

Fully-Protected Species

White-tailed Kite – White-tailed kites are raptors that forage for small rodents and other prey, primarily in open grassy or scrubby areas, with low ground cover and variable tree growth. It is unlikely that white-tailed kites nest on the project site, due to the paucity of trees and frequent disturbance. However, kites could nest in trees or shrubs (including larger coyote brush plants) in adjacent habitats, and this species forages on the landfill, especially in the less disturbed, vegetated portions of the site.

3.6.1.3 Sensitive and Regulated Habitats

U.S. Army Corps of Engineers Jurisdictional Habitats

Areas meeting the regulatory definition of "Waters of the U.S." (jurisdictional waters) are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under provisions of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U.S.," tributaries of waters otherwise defined as "Waters of the U.S.," the territorial seas, and wetlands. Construction activities within jurisdictional waters are regulated by the USACE.

Reconnaissance-level field surveys for jurisdictional waters on the project site were completed in accordance with USACE regulations and guidelines. The detention basins on-site are man-made, do not support hydrophytic plant species, and are subject to continuous ongoing disturbance as part of the landfill's normal operation. Such features have generally been considered non-jurisdictional by the USACE in the past due to their manmade nature, USACE-authorized fill-material holding area, and ongoing use for construction and operations. If the on-site detention basins are determined to be jurisdictional by the USACE, the impact is considered less than significant because the loss of the on-site detention basins do not result in a loss of wetland habitat because the basins do not support hydrophytic plant species and are subject to continuous disturbance. Most of the site is surrounded by wetland areas and Section 10 waters (including Coyote Creek); based on the proposed site plan, these areas would not be impacted by the proposed expansion.

State Water Resources Control Board Jurisdiction

The RWQCB is responsible for protecting surface, ground, and coastal waters within its boundaries, pursuant to the Porter-Cologne Water Quality Control Act of the California Water Code. The RWQCB has both federal and state jurisdiction under Section 401 of the Clean Water Act, for activities that could result in a discharge of dredged or fill material to a water body.

On the Newby Island Landfill project site, all potential USACE jurisdictional areas are also potential Waters of the State. The water detention basins on-site were most likely constructed in filled areas specifically under the permit requirements of the RWQCB to collect surface runoff and are therefore not considered to be Waters of the State.

California Department of Fish and Game Jurisdictional Habitats

The CDFG potentially extends the definition of stream to include “intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.”

Reconnaissance-level field surveys were completed within the landfill project area and based on *H.T. Harvey & Associates'* past experience working with CDFG representatives in similar habitats, it is their determination that there are no channels, drainages, or waterways on or immediately adjacent to the project site that the CDFG would claim under the Fish and Game Code.

City of San José Ordinance and Heritage Trees

The City of San José recognizes the substantial economic, environmental and aesthetic importance of the trees and plantings within the community and protects ordinance sized trees. An ordinance sized tree is any live or dead woody perennial plant having a main stem or trunk fifty-six inches or more in circumference (18 inches diameter) at a height measured twenty four inches above natural grade slope. The trees on site are non-native and, particularly since they are planted in compost and/or waste, are in only good to fair condition. When last measured, two of the Monterey pines surrounding the D-shaped area were ordinance sized. Prior to any future proposal to remove trees, they will need to be re-surveyed, measured, and evaluated for appropriate mitigation.

3.6.1.4 *Nuisance Species Abatement*

The landfill and Recyclery identified a number of measures that are used to control nuisance species, including rodents, gulls, and mosquitoes, that may be attracted by activities at these facilities. The following bird deterrent techniques have been implemented at the Newby Island Landfill and Recyclery:

- reducing availability of food supply by maintaining a small working face and through the compaction and daily cover of refuse;
- eliminating sources of water through drainage controls which prevent ponding of water;
- using blank-firing guns and other noise-making devices by landfill personnel to minimize birds' desire to land at the landfill; and
- using falcons and dogs to deter birds from the landfill.⁶⁵

As discussed previously, NISL operators have been using pyrotechnics since January 2008 or earlier to discourage gulls from congregating on the landfill. In June 2008, a focused effort to reduce numbers of gulls at the landfill was initiated using multiple abatement techniques including a combination of pyrotechnics, trained falcons, propane cannons, and paintball guns implemented by abatement specialists. SFBBO monitored the effectiveness of the abatement program and the data show that the number of gulls using the landfill was significantly lower after the initiation of gull abatement measures. Additional details about the monitoring are provided in Section 3.6.1.1. As discussed in that section, there is no data available showing the effectiveness of the landfill operator's current program versus the abatement specialist's program which ceased in January 2009.

The following landfill and Recyclery maintenance activities are implemented to discourage rodent and insect propagation and habitation:

- compacting and covering (with daily cover) refuse with soil to eliminate rodent habitat and food;
- covering of tire piles with a tarp, rapid processing of tires, and regular inspection of tires for mosquitoes;
- covering wastes with compacted soil or an approved alternative, and minimizing the work area over which refuse is spread to prevent the emergence of flies from eggs present in household wastes;
- diligent cleaning and housekeeping in the Recyclery; and
- monthly service by a rodent control contractor.

⁶⁵ The program of using falcons began after the biologists began monitoring the site for this report. Field surveys of the project site were completed by the consulting biologists in March 2008. The use of falcons and dogs on the landfill was initiated in June 2008 and ceased in 2009.

3.6.2 **Biological Resources Impacts**

3.6.2.1 ***Thresholds of Significance***

For the purposes of this project, a biological resources impact is considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.6.2.2 ***Project Assumptions***

The discussion of biological impacts below is based on the following, which are measures proposed as part of the project (see Section 1.4.3.14):

- Best Management Practices (*e.g.*, the use of construction fencing, silt fence, and other erosion and sediment controls around the borrow areas and the landfill) will be employed during construction (*e.g.*, relocation of the landfill vehicle maintenance shop and fueling station, construction of the new stormwater detention ponds) to avoid the inadvertent placement or translocation of sediment into the wetlands surrounding the landfill area. These measures are currently employed as part of existing operations on the site.
- The existing Spill Prevention Control and Countermeasure Plan and Hazardous Materials Management Plan will continue to be implemented and will remain effective for the entire site, including the D-shaped area. These plans are located in Appendix G of the JTD. The
- The wetland habitats outside of, and surrounding, the existing footprint of the landfill's impact areas (*i.e.*, the muted tidal salt marsh within wetland areas adjacent to the landfill and pickleweed/cattail wetland within the areas adjacent to Coyote Creek) will not be disturbed.
- The Construction & Demolition Recycling (C&D) area and any new activities that generate loud noises and vibration substantially greater than existing levels, as determined by a qualified acoustical consultant in consultation with a qualified biologist, will not be located within 700 feet of California clapper rail nesting habitat in Coyote Creek, South Coyote Slough, or associated tidal marsh habitats to the south, west, and north portions of the Newby Island site (see Figure 1.0-9).
- Ongoing landfill activities involve frequent use of heavy equipment, considerable noise, some ground vibrations, and movement of landfill personnel in proximity to the marsh and aquatic habitats surrounding the landfill. The intensity and locations of activities involving

such disturbance change to some extent from year to year under existing conditions, and thus virtually the entire landfill is subject to at least some such disturbance under existing conditions. In light of the above stated assumption that the C&D area and any new activities that generate loud noises and vibration substantially greater than existing levels will not be located within 700 feet of California clapper rail nesting habitat, it is assumed that the use of heavy equipment, noise, ground vibrations, and movement of landfill personnel near the sensitive habitats surrounding the landfill will not increase substantially as a result of the project. It is also assumed that only permitted activities described in Table 1.4-1 will occur on NISL and any new activities determined by the Director of Planning, Building, and Code Enforcement not listed in Table 1.4-1 may require subsequent environmental review and permits.

- Composting operations will continue to use both compost retention ponds at their existing location. The main stormwater retention pond that is located along the southern boundary of the site will be replaced with two new retention ponds located on non-sensitive habitat to the east and west of its current location.
- No hazardous materials will be stored within 100 feet of any water body or wetland located outside the landfill's perimeter berm. Best Management Practices (BMPs) concerning the use, storage, and transport of any hazardous or toxic materials will be strictly followed during construction and landfill operation to prevent contamination of Coyote Creek, South Coyote Slough, and other off-site wetland habitats.
- Leachate, condensate, or other wastewaters piped to the WPCP will be transported through existing pipelines.
- No ordinance-sized trees will be removed or disturbed.
- The landfill operator will continue to implement its vector controls.
- With approval of the project, the landfill will not be accepting more waste per year than it currently does, on average, but it will be able to accept the current levels of waste for a longer period than would be possible without the project.

Because of the historic presence of a sanitary landfill at this location, the long-established landfill operations on Newby Island, and the existence of entitlements that allow the operation to continue, the "baseline" for the purposes of the biological impacts analysis was assumed to be the existing conditions – the existing landfill and Recyclery operations and their existing operating constraints, which includes limited capacity that would require the landfill to close in 2025 or before.

3.6.2.3 *Discussion of Impacts ~~Assuming Landfill Closure in 2025 Resulting From~~ Operation of the Proposed Project*

~~According to the project proponent, the approval of the project would not change the landfill's estimated closure date of 2025 (see project objective B in Section 1.3). Therefore, the impact discussions in this section are based on the assumption that landfill operations under project conditions would end in 2025, as they likely would under existing conditions. If the landfill were to operate past 2025, additional impacts to those described in this section would occur. These additional impacts are~~ The discussions in this section evaluate the impacts from the proposed landfill activities. The impacts specifically from the extended duration of landfill activities resulting from the proposed increase in landfill capacity is discussed in Section 3.6.2.4.

Biotic Habitats

Disturbance of Landfill/Ruderal and Developed Habitats

The fill material present in developed and ruderal areas of the landfill (most of the site) supports an assemblage of primarily non-native plant species. No special-status plant species were found in this area, nor are any expected to occur in this habitat. Its biological value is limited due to the frequent and ongoing disturbance of this area and the lack of wetlands or pools. The much higher-quality, naturally occurring wetlands surrounding the project site are not manipulated and offer contiguous, natural habitat for plant and wildlife use.

Disturbance of the developed and ruderal habitat as a result of borrow and landfill activities would result in the displacement of some relatively common wildlife species and would result in a temporary loss of habitat for these species. However, ruderal and developed habitat would continue to be available on the site during the project's ongoing landfilling operations, since new landfilling activities would occur in a phased manner (*i.e.*, focusing on only a fraction of the landfill at any given time rather than being distributed throughout the entire site). In addition, the project would not cause the permanent loss of ruderal habitat, as the landfill would eventually be revegetated when landfilling activities cease. For most species the project area represents a very small fraction of such habitat available regionally, and the phased, temporary loss of such habitat would not result in significant impacts to biological resources.

Impact BIO – 1: The proposed project would not result in significant impacts to landfill/ruderal and developed habitats. **(Less Than Significant Impact)**

Tidal Brackish Marsh

The project does not propose any changes that would significantly impact the tidal brackish marsh habitat located adjacent to all areas of the project site.

Impact BIO – 2: The project would result in less than significant impacts to tidal brackish marsh habitat. **(Less Than Significant Impact)**

Aquatic Habitat within the Retention Basins and Adjacent Aquatic Habitat

The retention basins are man-made and were constructed to contain any sediment or pollution draining from the landfill to prevent it from entering the surrounding slough, Coyote Creek, and the associated wetlands (and ultimately San Francisco Bay). Ongoing disturbance of these basins occurs as a result of existing landfill activities. These basins provide limited, low-quality habitat for wildlife, and much higher-quality aquatic habitat is regionally abundant. Therefore, impacts to these retention basins (*e.g.*, by filling or sedimentation during landfill expansion) and the wildlife species that use them would be less than significant.

The landfill and Recyclery will continue to drain as described under existing conditions in §3.6.1.1 above (as well as in **Section 3.8 Hydrology and Water Quality**) under project conditions, except the main stormwater retention pond located in the southern portion of the site would be replaced with two new stormwater retention ponds. One of the new ponds would be located east of the existing main stormwater retention pond in the southern portion of the site and the other new pond would be located on the western side of the landfill (see Figure 1.0-10). New stormwater lines will be laid to

transport stormwater to these ponds. The two new stormwater retention ponds would be constructed in areas that are currently heavily disturbed by the landfill (*i.e.*, they would not be relocated to sensitive habitat areas). The project is not expected to result in an increase in the amount of runoff that leaves the landfill and enters sensitive areas (*e.g.*, Coyote Creek and South Coyote Slough), nor is it expected to result in reduced quality of water leaving the landfill. Therefore, relative to the existing baseline condition, the project will not result in substantial degradation of water quality off-site.

Continued implementation of the existing Spill Prevention Control and Countermeasure Plan and Hazardous Materials Management Plan, and implementation of BMPs and the presence of berms surrounding the Newby Island Landfill site, would prevent contamination of Coyote Creek, South Coyote Slough, and other wetland habitats. Thus, impacts of the project on these aquatic and wetland habitats, and on aquatic species such as the Central California Coast steelhead and Central Valley fall-run Chinook salmon, are less than significant.

Impact BIO – 3: The proposed project (with the continued implementation of the existing Spill Prevention Control and Countermeasure Plan, Hazardous Materials Management Plan, and BMPs, and the presence of berms surrounding the Newby Island Landfill site) would not result in significant impacts to aquatic habitat within the retention basins or adjacent aquatic habitat. **(Less Than Significant Impact)**

Special-Status Species and Sensitive Habitats

Compliance with Applicable Regulations

The vast majority of birds found on the project site are protected under the MBTA, and by the Fish and Game Code. Project activities have the potential to take nests, eggs, young or individuals of these protected species. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests. This impact is not significant under CEQA due to the local and regional abundance of the species in question and the low magnitude of the potential impact. This conclusion is based on the assumption that, the project would comply with applicable law, including the MBTA and the California Fish and Game Code.

Consistent with City policy, state and federal laws and regulations, the project will implement the following measures:

- The proposed project shall comply with applicable regulations including the Migratory Bird Treaty Act (MBTA) and California State Fish and Game Code. The project shall implement the following measures:
 - *Avoid Commencement of New Activities During the Nesting Season.* Grading, dumping, construction, and other project activities in the areas where they do not currently occur should be scheduled to commence during the no-breeding season to the extent feasible. The period of January through August encompasses the nesting season for most birds in the project area.
 - *Pre-disturbance Surveys.* If new activities are to occur during the breeding season, pre-disturbance surveys shall be conducted by a qualified ornithologist no more than 15 days prior to the initiation of new disturbance in any given area. Pre-disturbance surveys shall

- ensure that no nests of species protected by the MBTA or State Code will be disturbed during project implementation.
- *Buffer Zones.* If an active nest is found, a qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest until nesting has been completed.

Impact BIO – 4: The proposed project shall comply with applicable regulations including the MBTA and California Fish and Game Code. **(Less Than Significant Impact)**

Direct Impacts

Direct Impacts to Foraging Special-Status Species

A number of special-status wildlife species occur on the Newby Island Landfill site only as rare visitors, migrants, or transients, or forage in relatively low numbers on the site while breeding in nearby areas. These species, which are not expected to breed on or immediately adjacent to the site, include the yellow warbler, American peregrine falcon, golden eagle, short-eared owl, tricolored blackbird, western red bat, and hoary bat. The project would have no effect on the breeding success of these species. New activities at the landfill may result in a very small reduction of foraging habitat available to these species regionally. However, the site represents only a small fraction of potential foraging habitat for these species regionally, and these species occur on the site infrequently and/or in small numbers, so that the project has the potential to affect only a small fraction of these species' regional populations. Furthermore, foraging habitat for these species would continue to be available on the site during the project's ongoing landfilling operations, since new landfilling activities would occur in a phased manner (*i.e.*, focusing on only a fraction of the landfill at any given time rather than being distributed throughout the entire site). Also, the project would not cause the permanent loss of foraging habitat for these species, as the landfill will eventually be revegetated when landfilling activities cease. In addition, while the project would extend the useful life of the landfill, landfill activities under project conditions are assumed to end in 2025, as they likely would under existing conditions. Therefore, the project's impacts to foraging special-status species would not occur for a longer period of time under project conditions compared to existing conditions if the project was not approved. For these reasons, the project would have a less than significant impact on special-status species that may occasionally occur, but not breed, on the site.

Impact BIO – 5: The proposed project would not result in significant impacts to special-status species that forage on the site. **(Less Than Significant Impact)**

Direct Impacts to California Clapper Rails

Surveys conducted during the 1990 breeding season and winter season revealed a number of California clapper rails occupying marshes in the Fremont Lagoons and along upper Coyote Slough immediately to the west and southwest of the project site. Breeding-season surveys in the same areas did not detect clapper rails in 1989 or 2006. These results suggest that clapper rail use of the marshes surrounding the project site may be subject to considerable fluctuations, but that in at least some years, the tidal marsh in these areas provides breeding and foraging rail habitat in areas that are immediately adjacent to the project. These habitats would not be directly impacted by the proposed project.

Any clapper rails that currently occur in the marshes surrounding the project site must be habituated to ongoing landfilling activities, which involve frequent use of heavy equipment, considerable noise, some ground vibration, and movement of landfill personnel in proximity to the surrounding marsh, to some extent. However, current landfill activities could be impacting clapper rails in several ways. If clapper rails avoid otherwise suitable habitat close to the landfill due to aversion to noise, movement of heavy equipment, nuisance species abatement measures, and other activities, then current activities are inhibiting the occupation of suitable rail habitat. If rails occur in marshes immediately adjacent to the landfill, then sudden changes in the type or intensity of activity at a given location close to the marsh may disturb clapper rails, possibly forcing them into more marginal habitat, flushing the rails and subjecting them to greater risk of predation, or possibly even causing rails to abandon nests. Activities proposed by the project would require grading, use of heavy equipment, and movement of project personnel in proximity to the marshes that surround the project site. Such activities have the potential to impact clapper rails in the same ways and to the same extent as current landfill activities.

Under project conditions, new activities that result in substantially greater noise or vibration than existing activities will not occur within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project (see Project Assumptions in Section 3.6.2.2) as shown in Figure 1.0-9.⁶⁶ In addition, while the project would extend the useful life of the landfill, landfill activities under project conditions are assumed to end in 2025, as they likely would under existing conditions. Therefore, the project's impacts to California clapper rails would not occur for a longer period of time under project conditions compared to existing conditions if the project was not approved. For these reasons, any disturbance of California clapper rails in marshes adjacent to the project site would not exceed baseline levels in terms of the type and magnitude of the impacts that may occur in any given year.

Other impacts to California clapper rails are discussed in the "Indirect Impacts to Sensitive Wildlife Resulting from Landfill Support of Nuisance Species" section below.

Impact BIO – 6: The proposed project, with no new activities that would result in substantially greater noise or vibration than existing activities within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project, would result in less than significant impacts to the California clapper rail. **(Less Than Significant Impact)**

Direct Impacts to Individual Burrowing Owls and Their Burrows

No burrowing owls, signs of owls, or California ground squirrels were observed on the project site during the reconnaissance-level survey completed for this EIR. However, burrowing owls occur in a number of locations approximately two miles south of the site and infrequently disturbed ruderal/grassy areas on the project site could provide suitable foraging and breeding habitat for ground squirrels and burrowing owls.

⁶⁶ It is possible that under existing conditions, which does not restrict activities within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough (as under the proposed project), clapper rails are impacted. Under the proposed project, where a 700 foot buffer would be implemented, the impacts (if any) to clapper rails that are occurring under existing conditions within the 700 foot buffer would cease. Therefore, under the proposed project, impacts to clapper rails that could be occurring under existing conditions (if any) within the 700 foot buffer would no longer occur.

Potential burrowing owl habitat would continue to be available on the site during the project's ongoing landfilling operations, since new landfilling activities would occur in a phased manner (*i.e.*, focusing on only a fraction of the landfill at any given time rather than being distributed throughout the entire site). Also, the project would not cause the permanent loss of habitat for this species, since the landfill would eventually be revegetated when landfilling activities cease, whether that occurs in 2016 or 2025, or later. Therefore, impacts to burrowing owl habitat will be less than significant.

However, because burrowing owl populations are declining throughout much of their range in the United States, and particularly within the South Bay region, any impacts from the proposed project that result in the injury or mortality of individual owls or active nests, such as excavation or grading, or project-related disturbance that results in the abandonment of eggs or nestlings, would be considered significant.

If the landfill does cease operations in 2016, as it would if the existing conditions continued unchanged, owls could become established on the landfill surface after that date. (If landfill maintenance includes extirpation of ground squirrels, this is less likely to occur.) If the landfill continues to operate but at a substantially reduced level, as is also possible under existing conditions without the project, the potential for disturbance of any burrowing owls is similar to or (as waste falls to between half and less than one tenth existing) much less than what currently exists. If the level of MSW brought to the site continues at existing levels until 2025, with landfilling occurring at the increased height proposed, the likelihood of a significant impact would be similar to existing conditions but greater than if the landfill reached capacity in 2016 or if the landfill reduced incoming waste and reached capacity in 2025. Since the proposed project would extend the useful life of the landfill, the duration for significant impacts to burrowing owls would be greater under project conditions than under existing conditions if the project were not approved.

Impact BIO – 7: The proposed project would result in significant impacts to burrowing owls and their burrows if present on-site. **(Significant Impact)**

Direct Impacts to Nesting Loggerhead Shrikes and Bryant's Savannah Sparrows

Loggerhead shrikes forage, and likely breed, in various locations on the project site. Bryant's savannah sparrows may forage, and possibly breed, on ruderal/grassy areas of the project site and in adjacent pickleweed-dominated marshes. Any individuals of these species that currently occur on the project site must be habituated to ongoing landfilling activities, which involve frequent use of heavy equipment, considerable noise, some ground vibration, and movement of landfill personnel, to some extent. However, current landfill activities could be impacting these species by inhibiting occupation of suitable habitat due to disturbance. Also, sudden changes in the type or intensity of activity at a given site close to nesting areas could disturb these birds, possibly forcing them into more marginal habitat, flushing them and subjecting them to greater risk of predation, or possibly even causing birds to abandon nests.

A change in solid waste disposal activities, including operating in areas that have previously been allowed to vegetate, could result in the displacement of nesting and foraging birds and the loss of active nests of these species. Activities proposed by the project, including relocating the landfill maintenance shop, fueling station, and leachate management system to the D-shaped area, constructing new stormwater retention ponds, or moving the C&D area to a new location, could impact loggerhead shrikes and Bryant's savannah sparrows in the same ways and to the same extent as current landfill activities. Because new activities generating noise and vibration substantially

greater than existing levels will not occur within 700 feet of potential California clapper rail breeding habitat in marshes surrounding the site under the proposed project (see Project Assumptions above), shrikes nesting in shrubs adjacent to these marshes and savannah sparrows nesting within these marshes would not be subjected to substantially greater disturbance in terms of the type and magnitude of the impacts that may occur in any given year.⁶⁷

At most, only a very small proportion of regionally available habitat, and a small proportion of the regional populations, of these two species could be impacted by project disturbance, and the impacts would have a minimal effect on regional populations. Furthermore, habitat for these species would continue to be available on the site during the project's ongoing landfilling operations, since new landfilling activities would occur in a phased manner (*i.e.*, focusing on only a fraction of the landfill at any given time rather than being distributed throughout the entire site). Also, the project would not cause the permanent loss of habitat for these species, as the landfill would eventually be revegetated when landfilling activities cease. While the project would extend the useful life of the landfill, landfill activities under project conditions are assumed to end in 2025, as they likely would under existing conditions. Therefore, the project's impacts to nesting loggerhead shrikes and Bryant's savannah sparrows would not occur for a longer period of time under project conditions compared to existing conditions if the project was not approved. For these reasons, the project's impacts to nesting loggerhead shrikes and Bryant's savannah sparrows are less than significant.

Impact BIO – 8: The proposed project, with no new activities generating noise and vibration substantially greater than existing levels within 700 feet of potential California clapper rail breeding habitat in marshes surrounding the site (shrikes and sparrows nest in and around the same marshes), would not result in significant impacts to nesting loggerhead shrikes or Bryant's savannah sparrows. **(Less Than Significant Impact)**

Impacts to Wildlife from Lighting and Increased Hours of Operation

Artificial outdoor lighting has the potential to disrupt the activities of nocturnal wildlife or facilitate predation on sensitive species. There is already a baseline level of outdoor lighting at the landfill and The Recyclery for safety and security purposes. The project does not propose substantial increases in the number of lighted facilities or in the intensity of night lighting. Furthermore, since new facilities or activities that result in substantial increases in noise and vibration will not be located within 700 feet of potential California clapper rail breeding habitat, limiting the potential for new light sources to be located near marshes surrounding the landfill. Therefore, the project is not expected to result in significant impacts to wildlife activities or predation rates due to changes in the location or intensity of artificial lighting. While the project's lighting impact is less than significant, the project would extend the useful life of the landfill; therefore, the project's less than significant lighting impact could occur over a longer period of time in comparison to existing conditions if the project were not approved.

⁶⁷ It is possible that under existing conditions, which does not restrict activities within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough (as under the proposed project), shrikes and sparrows are impacted. Under the proposed project, where a 700 foot buffer would be implemented, the impacts (if any) to shrikes and sparrows that are occurring under existing conditions within the 700 foot buffer would cease. Therefore, under the proposed project, impacts to shrikes and sparrows that could be occurring under existing conditions (if any) within the 700 foot buffer, would no longer occur.

NISL is permitted to operate 24 hours a day. The current hours of operation for the landfill and Recyclery are 3:00 AM to 5:00 PM, Monday through Friday and 4:00 AM to 4:00 PM on Saturday. Presently, the landfill operator does not foresee any change to operating hours.⁶⁸ If the current hours of operation were to expand or shorten, the change in hours of operation would not result in significant impact to wildlife on the Refuge.⁶⁹ Any wildlife using Refuge lands adjacent to the landfill are already habituated to the types of activities being conducted on the landfill. In addition, since the project prohibits any new activities that generate loud noises and vibration substantially greater than existing levels within 700 feet of California clapper rail breeding habitat, increased hours of operation would not result in new significant impacts to wildlife.

Impact BIO – 9: The proposed project, with no new facilities or activities that would create a substantial increase in light levels on the site or would result in substantial increases in noise and vibration located within 700 feet of potential California clapper rail breeding habitat, would not result in new significant impacts to wildlife from lighting and increased hours of operation. **(Less Than Significant Impact)**

Indirect Impacts

Indirect Disturbance Impacts to Colonial Nesting Waterbirds

A breeding colony of black-crowned night herons, snowy egrets, and great egrets has previously been recorded along Coyote Creek in the Don Edwards San Francisco Bay National Wildlife Refuge, north of Newby Island Landfill. Peak numbers of nesting birds occurred in 2000, with over 100 snowy egret nests recorded that year. No nests were recorded in 2003, and no surveys have been conducted since that time, so it is not known whether the colony is still active. Project-related activities close to the marsh that surrounds the landfill would include filling the existing main stormwater retention pond, excavating new stormwater retention ponds, dumping and covering of refuse, and other activities that, on sites less exposed to continuous disturbance than the project site, could possibly disturb nesting waterbirds to the point of causing abandonment of nests or colonies. However, the waterbird colony along Coyote Creek was established under conditions that included ongoing landfilling activities, which involve frequent use of heavy equipment, considerable noise, some ground vibrations, and movement of landfill personnel in proximity to the surrounding marsh, suggesting that the birds are tolerant of existing levels and types of disturbance. In addition, new activities generating noise and vibration substantially greater than existing levels shall not occur within 700 feet of the higher-quality marsh habitat along Coyote Creek to the north of the project (see Project Assumptions above). As a result, any disturbance of nesting waders in marshes adjacent to the project site would not exceed baseline levels in terms of the type and magnitude of the impacts that may occur in any given year; and the project would not be likely to cause the abandonment of the rookery site, if it is still active, since disturbance associated with the project would not be substantially greater than baseline levels. While the project would extend the useful life of the landfill, landfill activities under project conditions are assumed to end in 2025, as they likely would under existing conditions. Therefore, the project's indirect impacts to colonial nesting waterbirds would not occur for a longer period of time under project conditions compared to existing conditions if the project was not approved. For these reasons, the project would not result in significant indirect impacts to colonial nesting waterbirds.

⁶⁸ Gambelin, Donald. Email from Allied Waste. "Re: Newby – hours of operation." 20 May 2009.

⁶⁹ Rottenborn, Steve. Personal communications with H.T. Harvey & Associates. 22 June 2009.

Impact BIO – 10: The proposed project, with no new activities generating noise and vibration substantially greater than existing levels within 700 feet of the higher-quality marsh habitat along Coyote Creek to the north of the project, would result in less than significant, indirect impacts to colonial nesting waterbirds. **(Less Than Significant Impact)**

Indirect Disturbance Impacts to Special-Status Marsh-Nesting Birds

Special-status bird species, including the white-tailed kite, northern harrier, San Francisco common yellowthroat, and Alameda song sparrow, are expected to breed in marsh or marsh-edge habitats and other areas adjacent to the Newby Island Landfill site. The project would not directly impact any marsh or marsh-edge habitat in which these species may breed.

Currently, the active solid waste disposal area and the C&D portions of the landfill are located near the central and the southwestern portions of the project site, respectively. Any individuals of these species that currently occur in the marshes surrounding the project site must be habituated to ongoing landfilling activities, which involve frequent use of heavy equipment, considerable noise, some ground vibration, and movement of landfill personnel in proximity to the surrounding marsh, to some extent. If marsh-nesting birds avoid otherwise suitable habitat close to the landfill due to aversion to noise, movement of heavy equipment, nuisance species abatement measures, and other activities, then current activities are inhibiting the occupation of suitable habitat. If individuals occur in marshes immediately adjacent to the landfill, then sudden changes in the type or intensity of activity at a given location close to the marsh may disturb these birds, possibly forcing them into more marginal habitat, flushing them and subjecting them to greater risk of predation, or possibly even causing birds to abandon nests. Activities proposed by the project, including relocating the landfill maintenance shop, fueling station, and leachate management system to the D-shaped area, construction of new stormwater detention ponds, or moving the C&D processing to an area closer to the tidal marsh, would require grading, use of heavy equipment, and movement of project personnel in proximity to the marshes that surround the project site. Such activities have the potential to impact marsh-nesting birds to the same extent as current landfill activities.

At most, one to two pairs each of northern harriers and white-tailed kites and four to eight pairs each of common yellowthroats and song sparrows are expected to breed in marsh areas directly adjacent to the D-shaped area, the location of the proposed sediment detention basin in the western part of the site, or other areas where activities at the landfill would change near marsh habitats.

Because new activities generating noise and vibration substantially greater than existing levels will not occur within 700 feet of potential California clapper rail breeding habitat along Coyote Creek or South Coyote Slough to the south, west, and north of the project (refer to Project Assumptions above), indirect disturbance of marshes associated with the project would not be substantially greater than baseline levels in terms of the type and magnitude of the impacts that may occur in any given year. In addition, while the project would extend the useful life of the landfill, landfill activities under project conditions are assumed to end in 2025, as they likely would under existing conditions. Therefore, the project's indirect impacts to special-status marsh-nesting birds would not occur for a longer period of time under project conditions compared to existing conditions if the project was not approved. For these reasons, the project's indirect impacts to special-status marsh-nesting birds are less than significant.

Impact BIO – 11: The proposed project, with no new activities that result in substantially greater noise or vibration than existing activities within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project, would result in less than significant, indirect impacts to special-status marsh-nesting birds. **(Less Than Significant Impact)**

Indirect Impacts to Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew

The salt marsh harvest mouse is expected to occur in pickleweed/bulrush-dominated tidal marsh habitats adjacent to the active landfill, and the salt marsh wandering shrew may inhabit these areas as well. These habitats would not be impacted directly by the proposed project.

Any salt marsh harvest mice or salt marsh wandering shrews that currently occur in the marshes surrounding the project site must be habituated to ongoing landfilling activities, which involve frequent use of heavy equipment, considerable noise, some ground vibration, and movement of landfill personnel in proximity to the surrounding marsh, to some extent. However, current landfill activities could be impacting these species in several ways. If salt marsh harvest mice or salt marsh wandering shrews avoid otherwise suitable habitat close to the landfill due to aversion to noise, movement of heavy equipment, and activities of landfill personnel, then current activities are inhibiting the occupation of suitable habitat for these species. If individuals occur in marshes immediately adjacent to the landfill, then sudden changes in the type or intensity of activity at a given site close to the marsh could disturb individuals, possibly forcing them into more marginal habitat, or flushing them and subjecting them to greater risk of predation. Activities proposed by the project would require grading, use of heavy equipment, and movement of project personnel in close proximity to the marshes that surround the project site. Such activities have the potential to impact salt marsh harvest mice and salt marsh wandering shrews in the same ways and to the same extent as current landfill activities. New activities that result in substantially greater noise or vibration than existing activities will not occur within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project (see Project Assumptions in Section 3.6.2.2). Therefore, any disturbance of salt marsh harvest mice or salt marsh wandering shrews in marshes adjacent to the project site will not exceed baseline levels in terms of the type and magnitude of the impacts that may occur in any given year. In addition, while the project would extend the useful life of the landfill, landfill activities under project conditions are assumed to end in 2025, as they likely would under existing conditions. Therefore, the project's impacts to the salt marsh mouse and salt marsh wandering shrew would not occur for a longer period of time under project conditions compared to existing conditions if the project was not approved. For these reasons, the project would result in less than significant impacts to the salt marsh harvest mouse or salt marsh wandering shrew.

Other impacts to these species are discussed in “Indirect Impacts to Sensitive Wildlife Resulting from Landfill Support of Nuisance Species” section below.

Impact BIO – 12: The proposed project, with no new activities that would result in substantially greater noise or vibration than existing activities within 700 feet of potential clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project, would result in less than significant indirect impacts to salt marsh harvest mouse or salt marsh wandering shrew. **(Less Than Significant Impact)**

*Indirect Impacts to Sensitive Wildlife Resulting from Landfill Support of Nuisance Species*⁷⁰

Landfills that accept food waste provide an anthropogenic food supply for scavenging nuisance species, which can impact other, more sensitive biological resources through predation and/or competition. Nuisance species that regularly use landfills include various species of gulls, corvids such as common ravens and American crows, raccoons, foxes, and feral cats.

Gull Food Source and Populations

Landfills provide a reliable food source for nuisance species. Some gull populations have become largely dependent on landfills for much of their food, and landfill foraging by gulls has been linked to an increase in breeding success and population increases in some gulls. While other anthropogenic food sources certainly benefit these species, the availability of food waste at landfills may allow nuisance species' populations to consistently enjoy higher reproductive success and survivorship, by reducing starvation and reducing the time adults need to spend away from nests and young looking for food, than would be possible without such a reliable food supply. While anthropogenic food at landfills replaces the need for depredation of the nuisance species' natural prey at times, nuisance species do not derive all of their food from landfills. Thus, the net effect of the availability of food waste at landfills may be to subsidize the diets of nuisance species, allowing them to achieve or maintain high populations which then continue preying on, or competing with (*e.g.*, for nesting sites), more sensitive species. Predation by nuisance species on rare species may have particularly severe population consequences when food subsidies allow the populations of nuisance species to remain high even as their prey populations decline.

As discussed previously, SFBBO continued gull surveys at NISL between February 2007 and December 2008 to determine the effectiveness of the gull abatement program that was initiated at the landfill in June 2008. SFBBO survey results found that the number of gulls using the landfill was significantly lower after the initiation of gull abatement activities than during the same month in 2007, prior to implementation of the abatement program. These gull surveys have continued to the present, according to Allied Waste.

Gulls counted on exposed refuse, as opposed to portions of the landfill where waste was not being actively dumped, varied from 23 percent in August 2007 to 93 percent in June 2007, with the other gulls during the survey period using non-refuse areas and partially exposed refuse areas. On the exposed refuse, over 75 percent of the California gulls surveyed were foraging.

As discussed previously, other high counts of gulls at Newby Island have included 33,000 (including 8,000 California gulls) in December 1998 and 24,000 (including 8,000 California gulls) in February 1998. Other gull species observed in high numbers at Newby Island include herring gulls, western gulls, glaucous-winged gulls, and Thayer's gulls. High gull counts recorded prior to the reduction in accepted waste at closure of the Tri-Cities Landfill in 2007 were likely the result of the availability of food at, and the proximity of, both landfills simultaneously, as gulls were frequently observed moving between the two landfills prior to 2007.

Preliminary USGS data indicate that California gull daily movements are influenced by the Newby Island Landfill, as gull attendance at the landfill appears to be correlated with the hours of operation and roosting sites are in proximity to the landfill. These California gulls nest on levees and islands

⁷⁰ "Nuisance species" in this context refers to species whose presence is supported by human action at levels or locations that adversely affect other species and/or their habitat.

within the salt pond complexes in the South Bay, and they and the other gull species roost and forage in the salt ponds, on islands and levees, and on mudflats in the South Bay.

California gull breeding populations in the South Bay have rapidly increased since 1982, when they were first recorded breeding here, to over 36,000 breeding birds in 2007. While the Newby Island Landfill was in operation long before California gulls began nesting in the South Bay, and this landfill has not been solely responsible for the increase in nesting gulls here, the availability of a dependable food source at Newby Island has likely contributed to the increase in California gulls in the South Bay region.

Gull Impacts to Sensitive Species

The increase in nesting California gull numbers in turn may result in impacts to more sensitive species in the South Bay. The most direct evidence of California gulls impacting ground-nesting waterbirds in the South Bay comes from observations of California gulls depredating camera-monitored American avocet nests, and radio-tagged avocet and black-necked stilt chicks in the Alviso area. In one study, camera data indicate that 15 percent of avocet nests were depredated by California gulls, and 61 percent of radio-marked avocet chicks and 23 percent of stilt chicks were depredated by California gulls.

California gulls have been documented preying on snowy plover eggs and chicks in Eden Landing salt ponds in Fremont and at Mono Lake. Surveys conducted by Point Reyes Bird Observatory (PRBO), SFBBO, and others since the 1970s have shown that the breeding population of federally threatened western snowy plovers in the South Bay is declining. South Bay surveys have documented declines in numbers of nesting snowy plovers from 351 breeding birds in 1978 to 270 in 1984, 216 in 1989, and 99 in 2006. It is possible that gulls subsidized by South Bay landfills are adversely affecting populations of California least terns and California black rails as well.

Similarly, Caspian tern populations in the South Bay have decreased from approximately 2,000 birds in the 1980s to about 150 currently. The two remaining Caspian tern colonies in the South Bay are near California gull colonies and few tern chicks have fledged in recent years.

Predation by gulls also likely has an adverse effect on the salt marsh harvest mouse and salt marsh wandering shrew. During very high winter tides, when marsh plains in the South Bay are almost completely inundated, gulls foraging over the marsh have been observed taking small mammals. Even if predation by California gulls occurs at a low rate (*i.e.*, by a low percentage of gulls), the sheer abundance of gulls in the South Bay indicates that predation can have a substantial proportional impact on populations of rare species.

California gulls may adversely affect these other waterbirds not only through predation, but also by encroaching on nesting areas used by those other species. The site of the largest gull colony in the South Bay, salt pond A6 in Alviso, was used for nesting by snowy plovers prior to the establishment of the gull colony there. As discussed in the cumulative impacts section of this EIR (**Section 6.3**), as part of the South Bay Salt Pond Restoration project, former salt pond A6 ~~will be~~ was restored ~~either through intentional levee breaching in December 2010 or “natural” breaching of the levee.~~ This will displace tens of thousands of breeding California gulls. Continued landfill operations would maintain a very attractive food resource for these displaced gulls and would make them more likely to seek out alternative breeding sites in the South bay (*e.g.*, islands created for nesting terns and snowy plovers). Full implementation of the nuisance species abatement plan (see MM BIO – 13.1) would mitigate the landfill’s contribution to the maintenance of gull populations in the South bay and

may encourage many of the gulls to move elsewhere due to scarcer resources. The largest Caspian tern colony in the South Bay was formerly on salt pond levees in Fremont; these levees now support several thousand pairs of California gulls and no terns. California gulls have also displaced Forster's terns from nesting islands in Mountain View.

In addition to subsidizing an increase in locally breeding California gulls, food availability at the Newby Island Landfill may be helping to subsidize populations of California gulls breeding in other areas and populations of other gull species by increasing survival rates of wintering gulls in the South Bay. This may have ecological consequences in other regions, particularly in breeding or staging areas for gulls. For instance, increased winter survival of herring, glaucous-winged, western, ring-billed, and Thayer's gulls due to the availability of food at the Newby Island Landfill could help to sustain populations in these species' breeding ranges (all to the north of the Bay Area), which in turn could result in higher levels of predation or nest-site competition for sensitive species near those gulls' breeding or staging areas. Gulls are known to be important predators of salmonids in the Pacific Northwest and increased survivorship of gulls wintering in the South Bay, as a result of food availability at landfills in winter, could result in increased predation on salmonids farther north.

Other avian predators, particularly corvids (crows and ravens), have been observed foraging and roosting regularly at Newby Island Landfill, and these species depredate western snowy plover and California clapper rail nests in the South Bay. Corvid numbers are increasing throughout California, and common raven numbers in particular have increased considerably in the South Bay over the past two decades. The availability of anthropogenic food resources, including food at landfills, is thought to be the most important factor in the increase in corvid populations in western North America. The availability of anthropogenic food resources is thought to subsidize corvid populations and an important source of these subsidies is food from landfills. Food availability at the Newby Island Landfill and other landfills, in addition to other anthropogenic food sources, is likely helping to support corvid ~~these~~ population increases in the South Bay.

A review of studies done on predation by corvids on listed species in California revealed 55 published and unpublished sources providing evidence that corvids are predators of eight special-status species in California or neighboring states. Corvids have been documented preying on the nest or young of California condors, greater sandhill cranes, western snowy plovers, California least terns, marbled murrelets, San Clemente Island loggerhead shrikes, least Bell's vireo, and desert tortoises. Most of these sources implicate the common raven and American crow, two corvid species observed using NISL for foraging and roosting. Further, American crows and common ravens have been documented as the most important predators of California least terns and western snowy plovers (two species that breed in San Francisco Bay) in several locations in California. In the South Bay, common ravens have been observed foraging on endangered species including the California clapper rail.

SFBBO and landfill staff have observed that corvids do not forage regularly at the active face of the landfill, but rather, they seem to be attracted primarily to the composting area and the piles of material outside the Recyclery.

Mammalian species, including non-native species such as red fox, Norway rat, roof rat, and feral cats, may also benefit from food subsidies at the landfill, possibly resulting in impacts to special-status species in adjacent habitats. California clapper rail predation by red foxes and feral cats has been documented in the south by tracking the fates of radio-marked rails. Norway rats are thought to be a primary predator of California clapper rail eggs, and raccoons have been known to prey on

clapper rail eggs. Red fox predation has been documented on western snowy plover nests in the South Bay and has resulted in the abandonment of two Caspian tern colonies and a heron colony in the South Bay.

Far-ranging species that forage at the landfill, such as corvids and gulls (especially gulls that forage at the landfill in winter and breed far to the north), may adversely affect sensitive species over broad areas. In addition, the proximity of the Newby Island Landfill to habitat for a number of sensitive species compounds the negative effect of nuisance species subsidies. The landfill is located immediately adjacent to nesting habitat for California clapper rails, American avocets, black-necked stilts, and other waterbirds, and habitat for salt marsh harvest mice and salt marsh wandering shrews. Western snowy plovers breed as close to the landfill as salt pond A22, approximately 1.5 miles north of the project site. As a result, individual nuisance animals receiving food subsidies at the landfill could directly affect sensitive species in nearby areas. For instance, a study by Liebeziet and George (2002), suggests “a reduction in food sources adjacent to areas of listed species activity may be one of the most important and cost effective means of immediately curtailing corvid activity at specific sites.” Therefore, the consulting biologists believe that controlling access to food resources for corvids and other nuisance species at NISL would benefit the recovery of special-status species in San Francisco Bay.

If the proposed landfill height increase is approved, the landfill will not be accepting more waste per year than it currently does, on average. Therefore, relative to the existing baseline levels of the landfill’s subsidies to nuisance species, the proposed project would not cause an increase in the populations of nuisance species or their adverse effects on more sensitive species. However, without approval of the proposed expansion, the amount of waste that will be accepted by the landfill would, according to the landfill operators, decrease substantially relative to existing conditions, so that the landfill would just be fulfilling its contractual obligations. Under this scenario, the reduction of incoming waste could reduce the number of gulls at the landfill because less food would be available. The other possible scenario would result in the landfill continuing to operate as it does today, and reaching capacity and ceasing to accept waste in about 2016.

Therefore, approval of the proposed project would extend the useful life of the landfill by allowing the landfill to accept more waste than would be permitted without the project, which (in comparison to conditions if the project were not approved) could subsidize a larger number of predator species for a longer period of time. While the project does not propose to change the estimated landfill closure date of 2025, the approval of the proposed project would allow for the operation of the landfill until it reaches its capacity, which could extend beyond 2025. While the City has control over the total volume of waste received at the landfill, the City does not have direct control over the closure date of the landfill. Therefore, the approval of the proposed PD Zoning would allow indefinite landfill use as long as capacity remains at the landfill.

According to the approved Post-Closure Plan, when the landfill has reached capacity, final cover will be placed on the landfill and most of the landfill will be used as passive open space. The final cover would include a one-foot thick foundation layer, a one-foot thick low-hydraulic conductivity layer, flexible membrane liner barrier layer, and a one-foot thick vegetative layer. The landfill post-closure would no longer be a food source for gulls.

~~Because~~ Since wintering and breeding gulls ~~and corvids~~ have been documented foraging in large numbers on refuse at the Newby Island Landfill, ~~and because corvids~~ and mammalian predators known to feed at landfills have been documented depredating special-status species in the South Bay,

the project would likely result in indirect impacts to sensitive species by either supporting larger populations of nuisance species or by extending the subsidy of those species for a longer period of time than would occur without the project.

Nuisance Species Management

As described previously, Allied Waste has been implementing nuisance species management measures at the landfill, including a focused gull abatement program initiated in June 2008. Monitoring of the first seven months of the abatement program suggests that these measures were highly successful in reducing the numbers of gulls obtaining food at the landfill (SFBBO 2008), as was the case with similar abatement measures at the Ox Mountain Landfill in San Mateo County. In particular, abatement using a combination of pyrotechnics and trained falcons, paintball guns, trucks, and propane cannons appeared to be more effective at discouraging gull use of the landfill than the use of pyrotechnics alone. These findings are consistent with evidence gathered at other landfills, suggesting that the use of falcons can be an effective abatement tool and that a combination of different techniques can improve abatement results by avoiding habituation.

Gull abatement activities at NISL during the latter half of 2008 were highly successful in reducing the numbers of gulls using the landfill (SFBBO 2008). However, SFBBO's results indicated that some gulls habituated quickly to abatement measures, and thus some gulls were able to continue obtaining food from the landfill. The number of individual gulls obtaining food from NISL is unknown, but due to the turnover in individuals at this location, the number of different individual gulls supported by the landfill is likely considerably higher than the mean number observed per survey by SFBBO.

From January 2009 through December 2009, the landfill operator began its own abatement program without the use of falcons or dogs. Surveys by SFBBO (2010) suggest there was a substantial reduction in gulls between 2007 and 2008, with a slight increase in gull numbers in 2009, during the period when the landfill took over gull abatement. In 2007, 2008, and 2009, average California gull numbers were estimated at 1200, 115, and 190, respectively. With an increase in gulls from 2008 - 2009, the landfill reinitiated the use of a third-party gull abatement specialist (Airstrike Bird Control, LLC), which reintroduced the use of falcons into the abatement program. In addition to falconry, they use pyrotechnics, ATV's, and paintball guns. Airstrike Bird Control is typically on-site at the landfill throughout the working day, normally from dawn to close. Falcons are flown throughout the day at the active face and other areas where gulls are seen loafing. In an effort to keep gulls from habituating, falcons are flown for different intervals throughout the day. Pyrotechnics are utilized between falcon flights and during inclement weather when conditions are not suitable for the use of falcons. Airstrike Bird Control's abatement efforts during January-September 2010 has resulted in the near-elimination of gull access to food waste on the ground at the landfill.

Although gull abatement measures implemented at NISL since June 2008, and particularly in 2010, have been successful, the potential remains for the project to result in adverse effects to sensitive species by subsidizing gulls if increasing numbers of gulls habituate to ongoing abatement measures, or if the multiple-technique abatement is relaxed. Also no data comparable to SFBBO's gull monitoring data are available for other nuisance species, such as corvids and nuisance mammals.

Impact BIO – 13: The approval of the project would increase the landfill's capacity, which would extend the useful life of the landfill and its availability to gulls, corvids, and other nuisance species as a food resource. The proposed project

would result in significant indirect impacts to sensitive wildlife from nuisance species at the landfill and Recyclery. **(Significant Impact)**

3.6.2.4 *Discussion of Impacts Resulting from Increased Capacity-Landfill Operations Past 2025*

Based on the information provided by the landfill operator, the landfill may still close in 2025 with Currently, the landfill's permitted capacity is 50.8 million cubic yards. With the approval of the project, but the landfill operator is not certain that will happen. In addition, as discussed previously, the City does not have direct control over the closure date of the landfill. Although landfill activities could continue beyond 2025 with or without project approval (depending on the rate of garbage intake between now and 2025), this project approval the landfill's capacity would be increased to 65.9 million cubic yards. In the absence of evidence that proves otherwise, it is assumed that the increase the probability that in landfill operations could continue beyond 2025. capacity would extend the useful life of the landfill and allow it to operate for a longer period of time because it would be allowed to take in more waste. Therefore, it is assumed in the analyses in this section that the that any ongoing impacts from landfill operations to marsh-related species would continue indefinitely into the future (i.e., beyond 2025). The proposed vertical expansion will change the pattern of landfill operations moving some of them to higher elevations, and those changes may reduce the ongoing impacts to species using the adjacent marsh habitat. Since that cannot be accurately predicted at this time, however, the impacts of continued landfill operations past 2025 are assumed to result in significant impacts to the marsh related species, some of which are special status; and therefore, the landfill owner will be required to provide suitable off site habitat for the species being impacted for the remaining useful landfill life (see MM BIO—14.1). also occur for a longer period of time.

If Under existing conditions (including existing permits), once the landfill operations are reaches its permitted capacity of 50.8 million cubic yards, including waste disposed on the D-shaped area, activities on the landfill would be limited to only post-closure and closure activities (such as constructing the landfill cap and grading to maintain drainage). Under the proposed project, landfill activities would continue past 2025, until the landfill reached the proposed capacity of 65.9 million cubic yards, which would extend landfill-related activities for an undetermined period of time. As under existing conditions, after the landfill reaches the proposed capacity, activities on the landfill (which would not then include the D-shaped area) would be limited to only post-closure and closure activities. The delta of extended time during which landfill activity continues, starting from the point in time where the landfill begins accepting the proposed additional 15.1 million cubic yards of capacity, is the increment of impact resulting from the proposed expansion of landfill capacity.

The extended duration of landfill activities resulting from the increased capacity provided by the proposed project could adversely impacting the value and usefulness of marsh habitat adjacent to the landfill footprint, a reassessment of beyond the then-landfill's current impacts from landfill operations on to marsh-related species will be done as part of a PD Permit prior to calendar year 2025 and if the City Director of Planning, Building and Code Enforcement determines that a significant impact to those and habitat for the reasons and in the manner discussed below. A discussion of direct and indirect impacts to special-status species (including deprivation of viable habitat or ongoing depredation of animals) will not occur because the landfill will continue to operate, and that mitigation measures have been successful, the landfill owner will not be required to provide suitable off site in the adjacent marsh habitat for the species being impacted for the remaining useful landfill life. The project's impacts to biological resources if the landfill operates past 2025 are

discussed in detail in the biological resources report in Appendix D of this EIR and are summarized below. is also provided below.

Direct Impacts to Special-Status Species

Direct Impacts to Nesting Loggerhead Shrikes and Bryant's Savannah Sparrows

~~Similar to~~ The extended duration of landfill activities resulting from the project conditions if the landfill were to close in 2025, would impact the same areas of habitat potentially used by nesting loggerhead shrikes and Bryant's savannah sparrows that are currently being impacted by landfill operating beyond 2025 would activities, as described in Impact BIO-7, because the extended duration of landfill activities will not encroach into new areas where activities are not currently occurring and, so, will not result in impacts to new areas. Although the open habitats on the majority of the project site provide suitable foraging habitat for these species, nesting habitat for Bryant's savannah sparrows is known to be limited to vegetated areas on the landfill (rather than areas actively in use for landfill or resource recovery purposes), and nesting habitat for loggerhead shrikes is known to be limited to areas with trees and shrubs around the perimeter of the landfill and in landscaped areas near the landfill's buildings. As a result, nesting habitat for these two species on the project site is limited, and would continue to be similarly limited as landfill use continues, so that only a few pairs of these species would nest on the site, as is currently the case. Nesting habitat for these species is much more widespread regionally: Bryant's savannah sparrows nest in high-marsh, ruderal, and grassland habitats in a number of bayside locations, and more locally in upland grasslands in the South Bay, while loggerhead shrikes nest even more widely in ruderal and grassland habitats in the region. As a result, the project site supports only a very small proportion of the regionally available habitat for, and a very small proportion of the regional populations, of these two species could be impacted by project disturbance, and the impacts would have a minimal effect on of, nesting loggerhead shrikes and Bryant's savannah sparrows. Therefore, only a very small proportion of regionally available habitat for, and a small proportion of regional populations, at most, of, nesting loggerhead shrikes and Bryant's savannah sparrows are being impacted and would continue to be impacted by both current and extended landfill activities.

Furthermore, existing habitat on the site for these species would continue to be available on the site during the project's ongoing extended landfilling operations, since new landfilling activities would occur in a phased manner on the site and in areas where landfilling activities have historically occurred already (i.e., focusing on only a fraction of the landfill at any given time rather than being distributed occurring simultaneously throughout the entire site). Also, the project would not cause the permanent loss of habitat for these species, as the landfill would eventually be revegetated when landfilling activities cease pursuant to the approved closure plan. Therefore, if the project results in landfill operations past 2025, the project's direct impacts to special-status species, i.e., the nesting loggerhead shrikes and Bryant's savannah sparrows, associated with the extended duration of landfill activities resulting from the proposed capacity increase would still be less than significant.

~~Direct~~ Indirect Impacts to Special-Status Species

Indirect Disturbance Impacts to Clapper Rails

Increasing the duration of current levels of disturbance (~~i.e., occurring from landfill operations continuing past 2025~~) due to the proposed capacity increase may have a long-term effect on California clapper rail populations. The reasons for this are as compared to baseline conditions.

Given the limited follows. California clapper rails typically use saltmarsh habitat for, and nesting and foraging, but they also use brackish-marsh habitat such as that occurring in the areas surrounding the landfill to varying degrees, and they are known to use such brackish habitat specifically along Coyote Slough (USFWS 2009). A 1990 survey of the marshes immediately west of the landfill found large numbers of clapper rails (H. T. Harvey & Associates 1990a, 1990b), and rails were recorded in South Coyote Slough to the south of the landfill in the late 1990s (S. Rottenborn, pers. obs.), indicating that habitat conditions in the marshes surrounding the landfill are suitable for clapper rails. Thus, although surveys in some years, such as 1989 and 2006 (H. T. Harvey & Associates 1989, 2007), have not detected clapper rails in the marshes to the west of the landfill, clapper rails occur in these marshes in at least some years. There are no good estimates of the extent of California clapper rail habitat remaining in San Francisco Bay (e.g., in USFWS 2009). However, Liu et al. (2009) estimated a minimum average population for the Bay in 2005-2008 of approximately 1425 individuals, with approximately 57 percent (i.e., approximately 812 individuals) occurring in the South Bay.

Noise associated with landfill equipment and activities, movement of equipment and landfill personnel, and other potential sources of disturbance associated with landfill activities may affect clapper rails using adjacent marshes near existing landfill activities by discouraging the use of otherwise suitable habitat close to these sources of disturbance; reducing the health and survival of clapper rails by disturbing foraging activities; or possibly even reducing the productivity of clapper rails by disturbing adult rails to the point of nest abandonment or distracting adults from the protection of their young. As a result, the USFWS typically recommends a buffer of at least 700 feet between activities that could result in breeding-season disturbance of clapper rails and potential clapper rail breeding habitat.

The extended duration of landfill activities resulting from the project would result in the same indirect impacts to the same areas of habitat potentially used by California clapper rails that are currently being impacted by landfill activities. The extended duration of landfill activities will not result in impacts to new areas. Furthermore, new activities generating noise and vibration substantially greater than existing levels shall not be allowed to occur within 700 feet of potential clapper rail habitat, so that the project will not increase the level of disturbance to adjacent marshes. However, due to this species' very low population sizes of California clapper rails, any activities that degrade the quality of this species' habitat or discourage use of suitable habitat by the species could contribute to a substantial effect on the species' regional (i.e., South Bay) and range-wide populations. As a result, extending the project's impacts beyond 2025 would result in duration of these indirect impacts on California clapper rails could prolong negative effects of landfill activities on rail populations and reduce the likelihood of recovery of this endangered species' populations in the area. Therefore, the City's consulting biologists concluded that extending the duration of landfill activities due to increased capacity could result in a significant impact to this species-endangered species if the landfill operations during this extended period of time occur within 700 feet of suitable habitat.

Indirect Impacts to Special Status Species

Indirect Disturbance Impacts to Colonial Nesting Waterbirds

IfBecause the landfill were to would operate beyond 2025 longer due to increased capacity, the project could would expose nesting waterbirds to "current baseline" levels of disturbance for a longer period than would occur without project approval. However, given the apparently ephemeral nature

of this colony, and the heronry along Coyote Slough adjacent to the degree to which landfill has not been observed to be active every year, and it is not unusual for small heronries move around from year to year throughout such as this to occur in a given area in some years but not others (Kelly et al. 2006). Furthermore, this heronry was established in 2002, under conditions involving landfill activities similar to those that will continue to occur on the Bay Area site as a result of this project. As a result, continuing the existing levels of disturbance for a longer duration is unlikely to cause the abandonment of this heronry (if it is still active) and will not impact populations of these species substantially. The birds will either continue to nest in the adjacent marsh, or they will nest in other locations in the Bay Area (of which there is a sufficient abundance to support the birds that have nested in this colony). Therefore, if the project results in extended duration of landfill operations past 2025, activities resulting from the proposed project would not affect regional populations of these waders, and the project's impacts to these species would be less than significant.

Indirect Disturbance Impacts to Special-Status Marsh-Nesting Birds

Because the proposed project will permit the landfill were to operate beyond 2025 for an indeterminate longer period due to increased capacity, the project could would expose marsh-nesting birds to “such as the Alameda song sparrow and San Francisco common yellowthroat to current baseline” levels of disturbance for a longer period than would occur without project approval. However, The extended duration of landfill activities resulting from the project would impact the same areas of habitat used by nesting Alameda song sparrows and San Francisco common yellowthroats that are currently being impacted by landfill activities, as described in Impact BIO-11; therefore, the extended duration of landfill activities will not result in impacts to new areas. Furthermore, because new activities generating noise and vibration substantially greater than existing levels will not be allowed to occur within 700 feet of potential California clapper rail breeding habitat along Coyote Creek or South Coyote Slough to the south, west, north, and east of the project, indirect disturbance of marshes associated with the project would not be substantially greater than baseline levels in terms of the type and magnitude of the impacts that may occur in any given year.

These species do not breed within the areas to be directly impacted by landfill activities, but rather breed in marsh habitats along the perimeter of the landfill. During the project's extended landfill operations, new landfill activities would occur in a phased manner on the site (i.e., focusing on only a fraction of the landfill at any given time rather than occurring simultaneously throughout the entire site). As a result, the number of pairs that could potentially be disturbed by landfill activities in adjacent areas would be limited, and at any given time, it is the opinion of H. T. Harvey & Associates biologists that no more than four to eight pairs each of common yellowthroats and song sparrows are expected to breed in marsh areas near landfill activities (based on these species' territory sizes and habitat distribution). Furthermore, any song sparrows or common yellowthroats that currently occur in marshes very close to the landfill are expected to be habituated to existing landfill activities, so that the number of breeding pairs that would be disturbed to the point of having survival or productivity affected would be even lower (e.g., compared to the more sensitive, and much more endangered, California clapper rail). Nesting habitat for these species is fairly widespread in the South Bay; for example, both species are very common in the brackish marshes along Coyote Slough and other brackish and salt marshes in the South Bay, and San Francisco common yellowthroats also breed in numbers along the lower Coyote Creek floodplain upstream from the site (in addition to numerous other areas throughout the South Bay). As a result, only a very small proportion of the regional populations, of these species could be indirectly impacted by project disturbance, even if the project subjects these birds to landfill-related disturbance for a longer duration. Therefore, if the extended duration of landfill activities resulting from the proposed project would results in landfill

~~operations past 2025, less than significant indirect impacts to these special-status marsh-nesting birds would be less (other than significant the California clapper rail).~~

Indirect Impacts to Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew

Increasing the duration of current baseline levels of disturbance may have a long-term effect on salt marsh harvest mice mouse or salt marsh wandering shrew populations. The reasons for this are as follows. Both of these mammals occur in fully tidal salt marsh habitat, such as that used by the California clapper rail described above, as well as non-tidal or muted tidal salt marsh habitat, such as that found in the salt marsh harvest mouse habitat preserve located just south/southwest of the Recyclery. Salt marsh harvest mice were captured in brackish marsh just west of the landfill in 2006 (H. T. Harvey & Associates 2007) and have been captured in the habitat preserve near the Recyclery as recently as 2009 (H. T. Harvey & Associates 2010). The distribution of the salt marsh wandering shrew is less well known because of difficulty conducting trapping studies for this species, but at other locations around San Francisco Bay, it has been recorded in a number of locations with salt marsh harvest mice, and thus for this project the two species are assumed to be distributed similarly. There are no good estimates of the extent of remaining habitat for these two species, or of the species' current populations. However, these mammals' saltmarsh habitat has been increasingly fragmented, and populations of both species are thought to be very low and imperiled.

Noise and vibrations associated with landfill equipment and activities, movement of equipment and landfill personnel, and other potential sources of disturbance associated with landfill activities may affect salt marsh harvest mice and salt marsh wandering shrews populations using adjacent marshes under existing landfill activities by discouraging the use of otherwise suitable habitat close to these sources of disturbance; reducing the health and survival of individuals by disturbing foraging activities; flushing individuals into areas providing less cover, potentially increasing predation; or possibly even reducing these species' productivity by disturbing adults to the point of abandonment of young. Due to the very small sizes of these animals and their close association with dense vegetative cover, the distance over which such disturbance could actually affect individual animals is much lower than for the clapper rail, and in the opinion of H. T. Harvey & Associates biologists, would not extend more than 100 feet from sources of disturbance.

The extended duration of landfill activities resulting from the project would result in indirect impacts to the same areas of habitat potentially used by salt marsh harvest mice and salt marsh wandering shrews that are currently being impacted by landfill activities, therefore the extended duration of landfill activities will not result in impacts to new areas. Furthermore, new activities generating noise and vibration substantially greater than existing levels shall not occur within 700 feet of potential clapper rail habitat, so that the project will not increase the level of disturbance to adjacent marshes in such areas. Given the distribution of potential clapper rail habitat in the project vicinity, a 700-foot buffer from rail habitat would preclude the project's introduction of substantially greater noise and vibration anywhere within 100 feet of potential harvest mouse and wandering shrew habitat as well.

Nevertheless, extending the duration of landfill activities will also extend the period during which landfill activities could be affecting habitat use/availability, and possibly survival and reproduction, of the salt marsh harvest mouse and salt marsh wandering shrew. Given these species' very low population sizes, any such impacts could result in a substantial effect on the species' populations, and thus extending the duration of landfill activities (compared to current baseline conditions. Given the limited habitat for, and low population sizes of the salt marsh harvest mouse and salt marsh

wandering shrew, extending the project's impact beyond 2025) would result in significant impacts to these species if the landfill operations occur within the 100 feet of suitable habitat.

Impact BIO – 14: ~~If the landfill were to operate beyond its estimated closure date of 2025, the project would result in~~ The project proposes to increase the capacity of the landfill, which would extend landfill activities and operations for an undetermined period of time. The extended duration of landfill activities and operations may result in significant impacts to the California clapper rail, if the landfill operations continue to occur within 700 feet of its suitable habitat and significant impacts to the salt marsh harvest mouse, and salt marsh wandering shrew if the landfill operations continue to occur within 100 feet of their suitable habitat. (Significant Impact)

3.6.3 Mitigation and Avoidance Measures

Burrowing Owls (During Landfill Operations)

MM BIO – 7.1: *Pre-activity Surveys.* To avoid take of burrowing owls in violation of the MBTA, surveys for burrowing owls shall be completed in potential habitat in conformance with the CDFG protocol, no more than ~~30~~ 15 days prior to the start of any new ground-disturbing activity (*i.e.*, any activity that is not already ongoing at the same location as part of the current landfill operations) associated with the expansion of the landfill, such as filling or grading in previously undisturbed ruderal/grassy areas. If no burrowing owls are located during these surveys, no additional action is warranted. If these surveys detect burrowing owls on or within 250 feet of the site proposed for landfilling or other uses, then any ongoing landfill activity near an occupied owl burrow can continue as long as it does not increase in intensity, or encroach closer to an existing burrow, based on review of proposed/ongoing activities in the burrow's vicinity by a qualified biologist, and as long as the existing burrow is not destroyed and owls are not in danger of being harmed. If activity would increase in intensity or proximity to an occupied burrow, based on review of proposed/ongoing activities in the burrow's vicinity by a qualified biologist, the following measures shall be implemented:

- *Buffer Zones.* If burrowing owls are present during the breeding season (generally 1 February to 31 August), a 250-foot buffer, within which no new project-related activity shall be permissible, shall be maintained between project activities and occupied burrows. Owls present at burrows on the site after 1 February shall be assumed to be nesting on or adjacent to the site unless evidence indicates otherwise. This protected area shall remain in effect until 31 August or, based upon monitoring evidence, until the young owls are foraging independently.
- *Relocation.* If ground-disturbing activities would directly impact an occupied burrow, the owl(s) shall be evicted outside the nesting season to avoid impacts to the bird(s). No burrowing owls shall be evicted from burrows during the nesting season (1 February through 31 August) unless evidence indicates that nesting is not actively

occurring (*e.g.*, because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season).

Nuisance Species Management

MM BIO – 13.1: The Nuisance Species Abatement Plan (NSAP), which is included in Appendix D of this EIR, shall be fully implemented at the landfill and the Recyclery as long as the landfill and/or Recyclery are in operation. Implementation and funding of the plan, including any consultants considered necessary and ~~selected~~ approved by the Director of Planning, Building, and Code Enforcement, and associated on-going City staff monitoring costs, shall be the responsibility of the landfill's General Manager or Director of Infrastructure Development, while the City of San José's Director of Planning, Building, and Code Enforcement shall oversee and enforce the NSAP's implementation.

The Plan includes standard nuisance species abatement measures (maintaining the minimum size ~~minimizing the~~ working face of the landfill consistent with existing practice and permits [Note: according to Allied Waste and the City's enforcement staff, the size of the working face of the landfill is kept as small as possible as part of normal landfill operations (which is also a requirement of the landfill's current SWFP) (source: Ferrier, Dennis. City of San José, Department of Planning, Building, and Code Enforcement. Personal communications. September 2009.)]; compacting and covering refuse – including using safe and stable tarps, ~~foams~~, or other materials in lieu of soil on the working face of the landfill if they are demonstrated to impede access to food waste by nuisance species; covering and rapid processing of tires; minimizing surface water; trapping or shooting medium-sized mammals; using rodenticides within buildings; and minimizing cover near nuisance species food sources and sensitive habitats) that must be implemented, as well as ~~and~~ adaptive nuisance species abatement measures (pyrotechnics, paintball guns, vehicles, trained dogs, trained falcons, human disturbance, distress call recordings, predator calls, decoys of distressed birds, visual distraction/deterrent devices, vegetation management, physical barriers and roots deterrents, ~~rodenticides~~ rodent trapping, a mobile component to gull abatement, use of radio-controlled drones, and mosquito larvicides) that are to be used as necessary. The standard measures are required to be implemented, although it is not expected that all of the measures in the NSAP are to be used simultaneously, the landfill operator may choose the appropriate measures to meet the success criteria identified in the NSAP.

Outdoor food waste processing on the Recyclery property attracts gulls and other nuisance species to an area of the site where the various abatement measures (pyrotechnics, cannons, falcons, etc.) are not generally used and may be inconvenient. Measures to control access to food waste by gulls and other nuisance species at this location must be implemented, including a building enclosure or netting. The building or netting design must be reviewed by a qualified biologist that has been approved by the Director of Planning, Building, and Code Enforcement.

As outlined in the NSAP, monitoring shall be conducted by qualified ~~ornithologists~~ biologists (which may include abatement personnel) ~~under the direction of the Director of Planning, Building, and Code Enforcement (but commissioned~~ funded by the landfill's General Manager or Director of Infrastructure Development) ~~and approved by the Director of Planning, Building, and Code Enforcement~~ to determine the effectiveness of initial abatement measures, and abatement techniques shall be adapted ~~in consultation with~~ as determined by these ~~ornithologists~~ biologists as necessary to ensure effectiveness. Regular monitoring reports (monthly memos and annual reports) shall be prepared by monitoring biologists and submitted to the Director of Planning, Building, and Code Enforcement to document the success of the abatement program. The monitoring and reporting criteria are outlined in detail in the NSAP in Appendix D of this EIR.

For each group of nuisance species addressed by the NSAP, success of the NSAP is defined as maintaining or reducing abundance of nuisance species using the landfill relative to baseline levels identified in the NSAP. In other words, the abatement plan is not considered successful if measures of abundance of nuisance species exceed baseline levels.

The Director of Planning, Building, and Code Enforcement will assemble and select members of an NSAP Oversight Committee. This committee will consist of qualified biologists, City of San José staff, and others chosen at the Director's discretion. The qualified biologists on the committee must include representatives from the Don Edwards San Francisco Bay National Wildlife Refuge and a Bay-area bird observatory. The Director may choose other biologists or others with relevant expertise, which may include City of San José Staff and the City's consultants. The NSAP Oversight Committee will review annual monitoring reports and provide recommendations to the Director regarding any changes in success criteria (including levels of abundance that should be considered the baseline against which monitoring results will be compared), abatement measures, monitoring measures, or other program components that should be made. This committee will be provided copies of monthly status reports and may also be consulted by the Director to discuss nuisance species abatement issues identified in monthly reviews. Meetings of the NSAP Oversight Committee shall include biologists that were retained to monitor wildlife at the landfill and Recyclery and who prepared the reports. For example, for gulls, the baseline conditions are the monitoring results from SFBBO's surveys from June 2008 into 2009. Because gull abundance in the South Bay may vary considerably from year to year, the "baseline" against which future monitoring results shall be compared to gauge the success of the abatement program is subject to change once the mean number of gulls on the ground per survey, compiled by month, from one or more additional years of monitoring is compared to or combined with SFBBO's data from 2008-2009. Qualified biologists selected by the Director of Planning, Building, and Code Enforcement (but funded by the landfill operator), which may include City of San José staff, the City's consultants, and others (e.g., possibly SFBBO staff and/or Don Edwards San Francisco

~~Bay National Wildlife Refuge biologists) shall review the first year of monitoring data and provide recommendations to the Director of Planning, Building, and Code Enforcement regarding any changes in success criteria (including levels of abundance that should be considered the baseline against which monitoring results will be compared) as well as any necessary changes in abatement measures (e.g., requiring the working face be permanently reduced to ensure gull numbers are equal or less than baseline levels), monitoring measures, or other program components. Additional details regarding the success criteria for nuisance species, including gulls, corvids, mammals, and mosquitoes, identified in the NSAP are provided in Appendix D of this EIR.~~

It is expected that the abatement process will be adaptive, and there may be periods when the success criteria described in the NSAP are not achieved and the NSAP Oversight Committee and consulting biologists determines the most effective means of limiting the landfill's subsidy of nuisance species populations. However, if the Director of Planning, Building, and Code Enforcement (in consultation with the NSAP Oversight Committee ~~qualified biologists selected by the Director of Planning, Building, and Code Enforcement but funded by the landfill operator~~) determines that the NSAP is being implemented successfully for that year of operation, no additional mitigation of this impact ~~(besides MM BIO – 13.2 below)~~ is necessary. If the Director determines that the abatement program is not being implemented consistently and successfully, and adaptive management is inadequate to achieve the desired success criteria, then MM BIO – 13.3 shall be implemented.

The implementation of this mitigation measure (MM BIO – 13.1) would not itself result in significant impacts. Since some level of abatement is currently ongoing, the noise, human activity, dogs, and falcons associated with gull abatement is part of the existing conditions, along with other ongoing landfill activities, ~~which are discussed above as having less than significant impacts to species using surrounding marshes.~~ Although abatement activities may increase in magnitude or frequency as a result of the implementation of the NSAP, the abatement activities are not expected to significantly impacts species using adjacent Refuge lands. ~~Gull a~~Abatement could result in indirect effects on species using Refuge lands by resulting in temporary increases in predation rates on sensitive species if gulls and other nuisance species that would otherwise have foraged at the landfill hunt for snowy plover chicks, avocet chicks, harvest mice, or the like when refuse is not available. This temporary indirect impact is considered less than significant because the long-term benefits of the gull and nuisance species abatement (e.g., reduction in gull populations in the South Bay) outweigh the short-term adverse effects.

~~MM BIO – 13.2:~~ ~~The landfill operator shall add a consistent mobile component to the abatement program. Specifically, one individual shall be dedicated to firing flares from a vehicle from different locations around the non disposal area.~~

~~This would remove roosting gulls and the limit the gulls' ability to take advantage of gaps in abatement in the active disposal area.~~⁷¹

MM BIO – 13.3: If the landfill operator is not meeting the success criteria specified in the NSAP (as summarized above), the operator shall be required to ~~manage predators~~ contribute to one or multiple ongoing predator control programs and/or provide habitat at an off-site, South Bay location(s) to benefit the sensitive species that are being adversely affected by nuisance species supported by the landfill. Such sensitive species may include species associated with managed ponds, such as the western snowy plover, terns, American avocets, and black-necked stilts, and/or species associated with tidal salt marshes, such as the California clapper rail, salt marsh harvest mouse, and salt marsh wandering shrew.

It is possible that the NSAP abatement measures will be partially successful and thus will reduce the project's contribution to nuisance species' populations, even if success criteria are not achieved; such an outcome would affect the amount of off-site mitigation that will need to be provided. It is also possible that abatement measures may be fully successful for one group of nuisance species (*e.g.*, gulls and corvids) but not another (*e.g.*, mammals), thus potentially affecting the suite of sensitive species that must be targeted by off-site mitigation. As a result, it is not possible at this time to identify the sensitive species that must be targeted by off-site mitigation, the type of habitat mitigation required (*e.g.*, salt pond management vs. tidal marsh restoration), or the amount of mitigation required.

If off-site mitigation is determined to be necessary, the Director of Planning, Building, and Code Enforcement, in consultation with qualified biologists as described in the NSAP and government agencies (*e.g.*, CDFG and USFWS) as appropriate, will determine the specific type and amount of off-site mitigation required. The type of mitigation required will depend on the type of nuisance species for which abatement measures are found to be inadequate, and the type of sensitive species potentially adversely affected by depredation or encroachment by the nuisance species. For example, if gull and corvid abatement is inadequate, off-site mitigation may take the form of a financial contribution to focused avian predator management programs being implemented by others in the South Bay (*e.g.*, elimination of problem corvids at snowy plover breeding locations); a financial contribution to habitat restoration and management projects being undertaken by others in the South Bay (*e.g.*, pond management and tidal marsh restoration by the CDFG at Eden Landing Ecological Preserve); acquisition and management/restoration of

⁷¹ ~~San Francisco Bay Bird Observatory. Gull Abatement Surveys at Newby Island, Interim Report, Winter 2009. 7 April 2009. The San Francisco Bay Bird Observatory (SFBBO) was hired by Allied Waste to complete gull surveys to determine the effectiveness of the abatement programs currently implemented by Allied Waste to reduce the number of breeding California gulls and wintering gulls feeding and roosting at the landfill. As a result of the above referenced report, SFBBO believes that it is necessary to implement MM BIO 13.2 to reduce the number of gulls at the landfill (Source: Demers, Jill. Personal communications with the Science Programs Director at SFBBO. 1 July 2009).~~

suitable pond and marsh habitat in the South Bay; or other measures to benefit sensitive species that are adversely affected by gulls and corvids.

The amount of off-site mitigation, either in terms of the amount of a financial contribution to predator/habitat management or the acreage of habitat restoration/management required, will depend on the difference between nuisance species monitoring results and the success criteria specified by the NSAP. The Director of Planning, Building, and Code Enforcement, in consultation with qualified biologists, will determine the appropriate level of the financial contribution or habitat restoration/management required based on the level of performance of the abatement program and an analysis, using the best information available at the time, of the likely effects of the nuisance species in question on sensitive species in the South Bay. If off-site habitat restoration/management is required, success of this mitigation measure would be achieved by presence of the target species in the restoration area within five years of site acquisition and restoration, coupled with management of the site that is directed at the species' habitat and life-history requirements.

3.6.3.1 *Additional Mitigation Measures Required if Due to Extended Duration of Landfill Operations Continue Past 2025 Activities Resulting From Increased Landfill Capacity*

California Clapper Rail, Salt Marsh Harvest Mice, and Salt Marsh Wandering Shrews

MM BIO – 14.1: Off-site Habitat Restoration/Enhancement. If Before landfill activities may continue beyond 2025, the point of current permitted capacity (50.8 million cubic yards), the need for and extent of off-site mitigation shall be provided by the landfill operator for continuation of disturbance for potential project impacts on the habitat of California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews beyond 2025 located within 700 feet of landfill activities during the extended project lifetime and on the habitat of salt marsh harvest mice and salt marsh wandering shrews located within 100 feet of landfill activities during the extended project lifetime shall be determined by a qualified biologist based on the performance standards and criteria described below. If impacts are determined to exist based on such performance standards and criteria, the operator of the landfill shall implement off-site mitigation to the extent determined to be necessary by the Director of Planning, Building, and Code Enforcement in accordance with the standards and criteria described herein. At this time, it is not possible to determine the precise type and extent of mitigation, if any, that is appropriate, because several determinants of to address the mitigation such as types and location environmental impacts that may be created by the continuation of landfill activities because the mitigation that is necessary will depend on several, currently unknown, factors:

- The location and distribution and abundance of suitable habitat for clapper rails these species present at the time the landfill reaches its current permitted capacity, which could be influenced by a variety of

factors extrinsic to landfill operations. Such factors may include changes in ~~2025~~ salinity in surrounding marshes due to changes in flows in Coyote Creek or tidal wetland restoration by the City (e.g., at Pond A18) or the South Bay Salt Ponds Restoration Project, non-native plant invasions, or the spread of invasive plants, all of which could alter the structure or plant species composition of habitat that is currently suitable for these species; and

- Presence/absence, and population size, of these species at the time the landfill reaches its current permitted capacity, which could be influenced by factors extrinsic to landfill operations such as the changes in habitat location and quality discussed in the previous bullet, habitat restoration in the South Bay (e.g., by the South Bay Salt Ponds Restoration Project), predation or competition that is not associated with landfill operations, or disease; and
- The types of activities that are ~~unknown~~ continuing beyond the point of current permitted capacity, their proximity to suitable habitat of these species, and the magnitude of their effects on these species.

For these reasons, the impacts to these species and habitat, if any, from the City's action to allow landfill activities beyond the point of current permitted capacity, and the mitigation appropriate to offset these impacts, cannot be precisely known at this time (see Appendix D for more detail). However, performance standards and criteria that must be met to establish the need for and extent of mitigation are established and shall be complied with by the landfill operator as described below.

~~If~~Before landfill activities may continue beyond ~~2025~~, the point of currently permitted capacity (50.8 million cubic yards), the landfill operator must complete subsequent biological review to document: 1) the need, if any, for off-site mitigation as described in MM BIO – 14.1 or 2) that the mitigation measures for operations (MM BIO – 7.1, 13.1, ~~13.2~~, and 13.3) have and will continue to reduced impacts to a less than significant level. On January 1, 2018 or when the landfill has filled 48 million cubic yards (whichever is sooner), the City shall require that the landfill operator shall have a qualified biologist complete an ~~more refined~~ assessment of the impacts of continuing landfill activities on California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews prior to the ~~calendar year 2025~~ point at which current permitted capacity is reached (50.8 million cubic yards) and before accepting any new waste beyond current permitted capacity. That assessment shall consider (a) the types and locations of project activities at the landfill that will continue beyond ~~2025~~, the point of current permitted capacity, (b) the distribution and quality of habitat in the surrounding marsh, (c) the distribution of clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in the marsh (and more widely, in the South Bay, if appropriate), to the best and most complete extent that this can be determined or reasonably estimated, and (d) the use of the affected marsh by clapper rails, salt marsh harvest mice, and salt marsh wandering shrews (e.g., for breeding or nonbreeding use), and other relevant factors based upon information known at the time. The biologist shall determine the effect of continuing

~~landfill activities on clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in terms of the acreage of clapper rail, salt marsh harvest mice, and salt marsh wandering shrews habitats impacted. A report of the~~

The biologist shall then determine the effect of continuing those landfill activities identified as noted in the previous paragraph on clapper rails, salt marsh harvest mice, and salt marsh wandering shrews. This assessment will be based on consideration of the types of landfill activities that will occur in proximity to habitat suitable for these species; currently, “in proximity to” means within 700 feet of habitat suitable for the clapper rail and within 100 feet of habitat suitable for the salt marsh harvest mouse and salt marsh wandering shrew, although these distances may be refined during the assessment by more up-to-date information on effects of human activities on these species if more information is available when the assessment is performed. The biologist will consider any landfill activities involving the movement of heavy equipment, loud noise, and substantial vibrations, and new lighting to represent an impact if (a) those activities would not be performed during regular landfill closure or post-closure activities, and (b) they occur in close proximity to suitable habitat as described above. For example, concrete crushing, regular ingress/egress through an area by garbage trucks, use of earth-moving equipment, and similar activities would be expected to have an impact on special-status species in habitat nearby by causing the abandonment or avoidance of otherwise suitable habitat, causing individuals to flush into areas where they may be preyed, or causing individuals to abandon young, whereas occasional use of smaller vehicles or pedestrian activities in an area (which would be similar to landfill post-closure activities that could be occurring at the time even in the absence of the project) would not represent an impact. If new information on the effects of certain types of anthropogenic disturbance becomes available prior to this assessment, such information will be used to provide a more accurate assessment of the impacts of continuing landfill activities on these three species.

The biologist will also take into account the anticipated duration (beyond the point of current permitted capacity – 50.8 million cubic yards) of activities that will adversely affect these species. Because these impacts are indirect and temporary (not permanent, but indefinite), the impacts of continuing landfill operations will cease after landfill capacity is reached and the landfill is closed. As a result, in determining the impacts to these species’ habitat and/or populations, the biologist will consider the duration of the impact based on the predicted closure date as of the time that current landfill capacity is reached.

The type, location, and duration of landfill activities shall be identified by the landfill engineer responsible for NISL, based on landfill contract information and on the landfill engineer’s professional knowledge and experience. Such information shall be provided to the Director of Planning, Building, and Code Enforcement and the consulting biologist.

The biologist's assessment will determine the extent of impacts of continuing activities on the California clapper rail, salt marsh harvest mice, and salt marsh wandering shrew in terms of either impacts to these species' populations (i.e., an estimate of the number of individuals/pairs affected) or the extent of impacts to these species' habitats, taking into account both habitat acreage and quality.

As part of this assessment, the biologist shall also conduct a survey of comparable salt marsh and brackish salt marsh habitat in the South Bay which are similar to the varying types of habitat within the 700 foot buffer (for clapper rails) and 100 foot buffer (for salt marsh harvest mice and wandering shrews) as measured from the then projected future landfill activities.

This survey shall: (a) consider the quality of the varying types of comparable habitat in these comparable South Bay areas and contrast it with the quality of the habitat within these buffer areas adjacent to the landfill; (b) determine to the extent practicable and allowed by then current laws and regulations the populations of average number of each of these special status species in the comparable South Bay habitats; and (c) determine to the extent practicable and allowed by then current laws and regulations the number of these special status species within their respective buffer areas around the landfill. Taking differences in habitat quality into consideration, the biologist shall then reach a professional judgment as to whether the special status species in the habitat areas adjacent to the landfill are less numerous than in the comparable South Bay habitat areas. If the biologist makes this determination, the landfill operator shall be required to provide off-site mitigation for the species in question on a one to one acreage ratio for the area of affected habitat adjacent to the landfill. If more than one species is determined to be affected, the landfill operator need only provide off-site mitigation for the single largest buffer area of any impacted species—i.e., if clapper rails and salt marsh harvest mice are both determined to be affected, the landfill operator shall provide mitigation based on the area of clapper rail habitat affected—as long as the mitigation habitat is suitable for all affected species. The buffer area to minimize impacts to the salt marsh harvest mice is 100 feet. The buffer area to minimize impacts to the clapper rail is 700 feet. So, for example, if the project is found to impact 7,000 square feet of clapper rail habitat and 1,000 square feet of salt marsh harvest mouse habitat, the landfill operator would provide 7,000 square feet of off-site habitat. In this example, this 7,000 square feet of off-site habitat would be for both the clapper rail and salt marsh harvest mouse.

A report of this assessment and the biologist's findings shall be submitted to the Director of Planning, Building, and Code Enforcement. If the City Director of Planning, Building and Code Enforcement determines, based on the findings of the biologist's report or any other reasonable information available, that significant impacts to those species (including deprivation of viable habitat or ongoing ~~degradation~~ disturbance of animals) in proximity to landfill activities) have not occurred from landfill activities up to that point in time and will not occur from continued landfill operations past 2025the point of current permitted capacity, the landfill owner will not be required to

provide suitable off-site habitat for the species being impacted for the remaining useful landfill life.

If, based on the findings of the biologist's report and any other reasonable information available, the Director of Planning, Building, and Code Enforcement determines that the continued operation of the landfill past 2025 the point of current permitted capacity will result in significant impacts to those sensitive species, off-site mitigation shall be provided ~~at~~to compensate for impacts to these species. Such mitigation shall be required to be implemented by the landfill operator using a 1:1 acreage ratio ~~via the restoration~~ (i.e., the area of the largest affected habitat adjacent to the landfill to the area of mitigation habitat to be provided by the landfill operator, as described above). This off-site mitigation may take one or ~~enhancement~~ ~~of~~ several forms, including, but not limited to:

- Restoring tidal marsh habitat suitable for use by ~~clapper rails, salt marsh harvest mice, and salt~~ these species
- Enhancing tidal marsh habitat suitable for use by these species [e.g., via the control of invasive plants or alteration of the hydrologic regime (such as restoration of a muted tidal marsh ~~wandering shrews~~ to a fully tidal condition)]
- Enhancing populations of these species by increasing reproduction and survivorship (e.g., by controlling predatory or competitive animal species, ~~in the South Bay.~~ addition to the abatement required at the landfill itself)

This mitigation may take the form of direct implementation by the landfill owner or a monetary contribution to similar efforts being performed by others, preferably in the area, such as efforts by the CDFG or USFWS. The mitigation must be described and in place prior to the landfill reaching its current permitted capacity of 50.8 million cubic yards.

At this time, it is not possible to accurately determine the amount of mitigation, if any, required, as the amount of mitigation required would depend on the type and extent of impacts identified and the type of mitigation employed. However, the mitigation must be adequate, in the opinion of the qualified biologist performing the assessment and the Director of Planning, Building, and Code Enforcement (in consultation with the NSAP Oversight Committee), based on the standards and criteria herein to fully offset any impacts to these species' populations and/or to the functions and values provided to these species by the habitat that is impacted so that there is no net adverse effects to these species' populations from extended landfill operations.

The same off-site mitigation can serve to mitigate impacts to California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews in a single location as long as the ~~habitat restored or enhanced~~ is suitable for mitigation implemented will benefit all three species. However, performance criteria for each species must be satisfied. For habitat restoration, performance criteria would include the presence of the target species within

five years of the development of vegetation suitable for each of those species within the restoration area and management of the site in accordance with the species' habitat and life-history requirements. For habitat enhancement or for measures, such as predator or competitor control, targeting increased reproduction and survivorship, performance criteria would include an increase in populations of the target species, within five years of implementation of the enhancement measures, commensurate with the estimated impact of the project. The precise location and means of providing such mitigation cannot be known at this time, as a variety of factors (including tidal marsh restoration and other activities that occur between now and 2025 the point current landfill capacity is reached) will influence available mitigation opportunities. Prior to 2025 calendar year the point at which waste exceeding the current landfill capacity is accepted by the landfill, the applicant shall have a qualified restoration ecologist/biologist prepare and implement a Mitigation Plan, which shall be submitted and reviewed by the Director of Planning, Building, and Code Enforcement and the NSAP Oversight Committee, detailing the following:

1. A summary of habitat and population impacts
2. Goals of the restoration/mitigation
3. A description of the type of mitigation (e.g., habitat restoration, habitat enhancement, and/or predator/competitor control)
- 3.4. The location of the mitigation site(s) and description of existing site conditions
- 4.5. Mitigation design (for habitat restoration and enhancement efforts), including:
 - Existing and proposed site hydrology, geomorphology, and geotechnical stability, as applicable
 - Grading/restoration plan
 - Soil amendments and other site preparation elements as appropriate
 - Maintenance activities
 - Remedial measures and adaptive management measures
- 5.6. Monitoring Plan (including final and performance criteria (which will include the minimum performance criteria mentioned above), monitoring methods, data analysis, reporting requirements, and monitoring schedule)
- 6.7. A contingency plan for mitigation elements that do not meet performance or final success criteria

The Mitigation Plan shall be submitted to the Director of Planning, Building, and Code Enforcement, in consultation with the NSAP Oversight Committee, for review and approval. Once approved, the landfill operator shall fully implement and comply with such Mitigation Plan prior to accepting any new waste beyond the current permitted capacity of 50.8 million cubic yards. The City shall ensure that the mitigation is provided and that the mitigation site meets its success criteria.

3.6.4 Conclusion

- Impact BIO – 1:** The proposed project would result in less than significant impacts to landfill/ruderal and developed habitats. **(Less Than Significant Impact)**
- Impact BIO – 2:** The project would result in less than significant impacts to tidal brackish marsh habitat. **(Less Than Significant Impact)**
- Impact BIO – 3:** The proposed project (with the continued implementation of the existing Spill Prevention Control and Countermeasure Plan, Hazardous Materials Management Plan, and BMPs, and the presence of berms surrounding the Newby Island Landfill site) would not result in significant impacts to aquatic habitat within the retention basins or adjacent aquatic habitat. **(Less Than Significant Impact)**
- Impact BIO – 4:** The proposed project shall comply with applicable regulations including the MBTA and California Fish and Game Code. **(Less Than Significant Impact)**
- Impact BIO – 5:** The proposed project would not result in significant impacts to special-status species that forage on the site. **(Less Than Significant Impact)**
- Impact BIO – 6:** The proposed project, with no new activities that would result in substantially greater noise or vibration than existing activities within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project, would result in less than significant impacts to the California Clapper Rail. **(Less Than Significant Impact)**
- Impact BIO – 7:** The proposed project, with the implementation of the proposed mitigation measure, would not result in significant impacts to burrowing owls and their burrows if present on-site. **(Less Than Significant Impact with Mitigation Incorporated)**
- Impact BIO – 8:** The proposed project, with no new activities generating noise and vibration substantially greater than existing levels within 700 feet of potential California clapper rail breeding habitat in marshes surrounding the site, would result in less than significant impacts to Nesting Loggerhead Shrikes and Bryant’s Savannah Sparrows. **(Less Than Significant Impact)**
- Impact BIO – 9:** The proposed project, with no new facilities that result in substantial increases in noise and vibration located within 700 feet of potential California clapper rail breeding habitat, would result in less than significant impacts to wildlife from lighting and increased hours of operation. **(Less Than Significant Impact)**
- Impact BIO – 10:** The proposed project, with no new activities generating noise and vibration substantially greater than existing levels within 700 feet of the higher-quality marsh habitat along Coyote Creek to the north of the project, would result in

less than significant, indirect impacts to colonial nesting waterbirds. **(Less Than Significant Impact)**

- Impact BIO – 11:** The proposed project, with no new activities that result in substantially greater noise or vibration than existing activities within 700 feet of potential California clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project, would result in less than significant, indirect impacts to special-status marsh-nesting birds. **(Less Than Significant Impact)**
- Impact BIO – 12:** The proposed project, with no new activities that would result in substantially greater noise or vibration than existing activities within 700 feet of potential clapper rail breeding habitat in Coyote Creek or South Coyote Slough to the south, west, and north of the project, would result in less than significant indirect impacts to salt marsh harvest mouse or salt marsh wandering shrew. **(Less Than Significant Impact)**
- Impact BIO – 13:** The proposed project, with the implementation of the proposed mitigation measures (MM BIO – 13.1 and ~~13.2~~ and 13.3 if necessary), would not result in significant indirect impacts to sensitive wildlife from nuisance species at the landfill and Recyclery. **(Less Than Significant Impact with Mitigation Incorporated)**
- Impact BIO – 14:** If the landfill were to operate beyond its estimated closure date of 2025, the project, with the implementation of the proposed mitigation measure (MM BIO – 14.1) would result in less than significant impacts to the California clapper rail, salt marsh harvest mouse, and salt marsh wandering shrew. **(Less Than Significant Impact with Mitigation Incorporated)**

3.7 GEOLOGY AND SOILS

The following discussion is based on a geotechnical evaluation prepared by *GeoLogic Associates* (GLA) in June 2008. The purpose of the geotechnical evaluation is to assess the suitability of soil and geologic conditions for extending the vertical height of the landfill. The report was peer reviewed by Professor Jonathan Bray, Ph.D, P.E. of the University of California at Berkeley; Professor Timothy D. Stark, Ph.D, P.E. of *Stark Consultants* and the University of Illinois at Urbana-Champaign; Professor Emeritus James K. Mitchell, Ph.D of Virginia Polytechnic Institute and State University, and Rick Mitchell of *RMC Geoscience, Inc.* Copies of the report and peer reviews are included in Appendix E of this EIR.

3.7.1 Setting

3.7.1.1 *Regional and Site Geology*

The project site is located at the southernmost end of San Francisco Bay, at the northern end of the Santa Clara Valley. Historically, the area of the present San Francisco Bay exhibited significant relief with deposition of fluvial sands, silts, and interbedded clays being largely controlled by changes in sea level. The Santa Clara Valley is estimated to be filled with up to 3,000 feet of Plio-Pleistocene through Holocene-age fluvial and estuary deposits. Bedrock beneath the alluvium of the Santa Clara Valley consists of highly sheared sandstone, shale, chert, conglomerate, and mélange of the Jurassic-Cretaceous Franciscan Formation.

The Santa Clara Formation directly overlies the Franciscan Formation in many areas and is composed of poorly sorted pebbly sandstones, siltstones, and clay which generally become finer grained and thicker from southeast to northwest. Overlying the Santa Clara Formation, are an interfingering sequence of clay, silt, and sand deposits resulting from on-lapping and regression of the ocean. These sediments have been referred to as Bay Mud or Younger Bay Mud.

The soil materials on-site were generally categorized as compacted subgrade and berm fill (silty to sandy clay), young bay mud (sandy to silty clay), older bay alluvium (sandy to silty clay), and sand layers (clean to silty to clayey). The fill soils associated with levee construction was found around the perimeter of the site and were found to be composed of sandy silt to silty clay. These materials were generally placed directly above the young bay mud deposits. The young bay mud exists beneath the perimeter levee and at the existing ground surface beyond the levee. The older bay alluvium underlies the young bay mud on the site. Additional details about on-site soil characteristics (*e.g.*, compressibility, consolidation, and strength) are provided in Appendix E.

NISL has been used as a landfill since the 1930s. Between 1931 and 1956, the disposal and incineration of solid waste took place in select northern and eastern portions of the landfill. After 1956, burning was discontinued and subsequent waste disposal practices were more conventional.⁷² The specific make-up of all the buried waste on the landfill is unknown. Up until the mid-1960's, the D-shaped area was used as a burn dump after which additional fill material was placed on the area. The fill material that covers the D-shaped area may contain some hazardous materials. While no evidence of their presence has been found during previous testing, the D-shaped area was used as a

⁷² GeoLogic Associates. Geotechnical Evaluation for Proposed Vertical Expansion Newby Island Landfill. June 2008. Page 1.

burn dump and for landfilling for over 70 years, and the specific make-up of all the buried waste on the D-shaped area is unknown.⁷³

3.7.1.2 *Regional and Surface Hydrogeology*

The project site is located within the Santa Clara Valley Groundwater Basin. This groundwater basin consists of a perched water zone, the Newark Aquifer, and the Centerville Aquifer. Groundwater at NISL is locally influenced by both tidally-affected surface water (*e.g.*, Coyote Creek) and on-site pumping for surface and groundwater control. This pumping has resulted in an inward-directed groundwater gradient toward a temporary sump on the southern side of the landfill where groundwater is at an elevation of about -40 feet (NGVD29).

3.7.1.3 *Seismicity and Faults*

The project site is located within the San Francisco Bay region, one of the most seismically active areas in the United States. The project area is affected by the San Andreas fault system located within the Santa Cruz Mountains west of the bay. The Hayward and Calaveras faults, which are splays of the San Andreas fault are located in the Diablo Range on the east side of the San Francisco Bay. The project site is located approximately 2.1 miles southwest of the Hayward fault, 6.1 miles southwest of the Calaveras fault, and 15.5 miles northeast of the San Andreas fault. While no known active or potentially active faults transect the project site, the project area has experienced strong shaking from earthquakes in the past.

While the likelihood of fault surface rupture and associated displacements within the site is relatively low, there is the potential for strong earthquake-induced ground motion and subsequent ground failure, including liquefaction.

A seismic hazard assessment was completed for the project to determine the seismic parameters [*i.e.*, earthquake magnitude and peak ground acceleration (PGA)]. The assessment looked at ground motions generated by maximum credible earthquakes (MCE) on individual faults, and the PGA is the largest acceleration value at the site based on all known fault sources. A MCE is defined as the maximum earthquake that appears capable of occurring under the presently known tectonic framework. The PGA is based on factors including site-to-fault distance, earthquake magnitude, and site soils.

As discussed previously, the site is located near the San Andreas, Hayward, and Calaveras faults. The analysis found that a MCE magnitude event at the Hayward fault would have similar or greater effects at the project site than MCE magnitude events and PGAs at the San Andreas or Calaveras faults (refer to Appendix E for more detail). The MCE at the Hayward fault would be a moment magnitude (M_w) 7.1 event with a PGA of 0.41 gravity.

⁷³ City of San José. Draft Environmental Impact Report for the Newby Island General Plan Amendments and Planned Development Rezoning. May 2002.

3.7.2 Geology and Soils Impacts

3.7.2.1 *Thresholds of Significance*

For the purposes of this project, a geologic or seismic impact is considered significant if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,
 - Strong seismic ground shaking, or
 - Seismic-related ground failure, including liquefaction.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

3.7.2.2 *Discussion of Impacts*

As discussed previously, the makeup of all the buried waste on the landfill and D-shaped area is unknown. As discussed in the EIR prepared for the General Plan amendment and rezoning of the D-shaped area, the project proposed at that time included excavation of all of the old garbage and other undocumented fill from that area prior to construction. The current proposal for the D-shaped area would allow buildings on the site, but nothing is specifically proposed at this time. The construction of buildings on the site will require a PD Permit and subsequent environmental review. Before any PD Permit is approved for construction or development on the D-shaped area or elsewhere on the project site, a design level geotechnical report documenting testing of the conditions on the site will be prepared to the satisfaction of both the Director of Planning, Building, and Code Enforcement and the City Geologist.

Impact GEO – 1: Since the makeup of the buried waste on the landfill and D-shaped area is unknown, the construction or development of structures on the landfill or D-shaped area could result in significant geological impacts. **(Significant Impact)**

Seismic Hazard Impacts

The SHAKE2000 program, which accounts for various factors including on-site soil types and characteristics in the analysis, modeled the effects of Hayward fault MCEs and PGA (including liquefaction and foundation failures) at the site to evaluate the dynamic settlement of the landfill foundation.

Seismically-Induced Dynamic Settlement

Loose, sandy soil deposits experiencing strong ground shaking during an earthquake can densify, resulting in settlement. Large settlements beneath a landfill liner, and particularly differential settlements over short distances, could stress the liner beyond its functional limit. Dynamic settlement analyses were performed based on seismic demand and site soils to determine estimated ranges for this settlement during the MCE event.

The results of the analyses indicate that the dynamic settlement due to the MCE may range from 0.5 to five inches, with a differential dynamic settlement of one to two inches in a horizontal distance of a few hundred feet. Given the typical geometry of site soils, differential dynamic settlement is anticipated to be relatively small and the integrity of the landfill should not be significantly impaired (refer to Appendix E).

Impact GEO – 2: The proposed project would not result in significant impacts related to seismically induced settlement. **(Less Than Significant Impact)**

Liquefaction and Slope Stability

Liquefaction

Liquefaction is a phenomenon in which soil located below the groundwater surface loses a substantial amount of strength due to strong earthquake ground shaking. In severe cases, liquefied soils can lose nearly all strength, causing slope failures, ground distortion, and damage to overlying structures.

Liquefaction-induced cracking, lateral spreading, and sand boils were reported to have occurred south of Newby Island along Coyote Creek during the 1906 earthquake. In addition, the USGS has identified Newby Island as having a “very high” liquefaction susceptibility.

The liquefaction potential at the NISL was evaluated by the consulting engineers and geologists. The methodology used and detailed results of the liquefaction analysis are described in Appendix E of this EIR. Based on the results of the liquefaction analysis, combined with the fact that liquefaction is known to have occurred in the general vicinity of Newby Island in the past, the site is considered susceptible to liquefaction and measures would need to be incorporated to prevent liquefaction-related stability failures. Specifically, the existing sandy strata between elevation of about -10 to -30 feet, if left unmitigated, could experience some ground cracking, lateral spreading, liquefaction-related stability failures, failure of the perimeter levee, and minor ground disturbance might be anticipated during a MCE, but catastrophic failure is not anticipated. These liquefaction-related impacts exist without the proposed project.

Landfill Foundation Slope Stability

Cross-sections of the landfill, that include the most critical slopes of the landfill based on height, steepness, and geometry of foundations soils and/or landfill components (such as the liner), were prepared, transferred, and analyzed for slope stability using a computer program for analysis. Effects from groundwater, leachate, and seismic and seismic-related events ground motions were accounted for in the analyses. Potential deep foundation soil failures, liner failures, composite failures, and

liquefaction-related failures were also considered in the analyses. Additional detail about the methodology used to evaluate slope stability is included in Appendix E of this EIR.

Analyses were performed using a suite of actual recorded earthquake time histories scaled to the site seismic parameters to estimate the amount of seismically-induced slope movements during the MCE. The industry and regulators have determined that acceptable seismically-induced displacements of lined landfills should be less than about six inches. However, for the northerly unlined cells of the site where critical systems are less sensitive to movement, larger seismic displacements in the order of one to two feet may be acceptable.

Based on these analyses, the seismically-induced deformations/displacements were estimated to be between zero and six inches. These analytical results are based on planned landfill liquefaction improvements having been performed (see below). Given the conservative nature of the assumptions used in the analyses and the completion of the planned landfill improvements (which is summarized below and further detailed in Appendix E of this EIR), the estimated displacements were considered acceptable by the consulting engineers and geologists. Refer to Appendix E of this EIR for more details about the slope stability analyses and results.

It should be noted that the potential for liquefaction-related slope stability failures is generally limited to the front slope of the landfill adjacent to the perimeter levee, which is within the existing permitted footprint of the landfill. The proposed vertical expansion will not be significantly impacted by the potential for liquefaction.

Planned Landfill Improvement: Independent of the project, the landfill operator plans to complete the following landfill stability improvements:

- The landfill operator is currently finalizing a liquefaction improvement plan with detailed design measures. The liquefaction improvement plan will be submitted to the Director of Planning, Building, and Code Enforcement, San Francisco Bay Regional Water Quality Control Board (RWQCB), Santa Clara Valley Water District, and California Integrated Waste Management Board (CIWMB – now CalRecycle), for review. The plan will include specific measures to reduce the existing potential for liquefaction related slope instability and distress. This plan, including the measures, will be peer reviewed and concurred upon by Professor Jonathan Bray, Professor Timothy Stark, Professor Emeritus James K. Mitchell, and Rick Mitchell (or experts of equivalent expertise) and documented in a final design concurrence letter issued by the peer reviewers (either jointly or individually), which shall include their signatures ~~and appropriate state registered engineer stamp~~. The technologies could include, but are not limited to, the measures listed in the geotechnical evaluation completed by *GeoLogic Associates* in June 2008 (see Appendix E), which are summarized below. The implementation of the liquefaction improvement plan is anticipated to begin in 2010 and be completed prior to closure of the site.
 - Fix contiguous, loose, potentially liquefiable shallow to intermediate depth sandy strata at the NISL. The liquefaction methods which appear to be most applicable are those which strengthen the soil in place by the introduction of cement with some type of in-situ mixing such as transverse shear walls, cement deep soil mixing, trench cutting remixing deep wall method, and jet grouting. Any of these methods may be used individually or in conjunction with each other as approved by the Regional Board. If other methods of soil improvement become available at some point in the future, the applicant may provide sufficient technical information to the Regional Board for consideration and approval at

- that time. In undeveloped areas of the landfill where the shallowest sandy strata are determined to be the only potentially liquefiable layers, dynamic deep compaction and removal and replacement may also be applicable. Any method which can stabilize liquefiable soils, even one which may not yet have been developed, should not be precluded from consideration.
- Complete additional borings to more precisely delineate problematic liquefiable areas.
 - Continue the on-going program to reduce hydraulic head within the existing unlined waste prism to improve stability conditions.
 - Maintain the lined cell subdrain systems until surface grades or subsurface conditions improve due to refuse settlement and/or subgrade consolidation such that additional pore pressures can be accommodated without adversely affecting slope stability.
 - Install piezometers below at least two of the future waste cells in order to ensure that adequate drainage of foundation soil groundwater pressure is taking place as the waste fills are placed.
 - The base and slope membrane liners for future cells adjacent to the perimeter levee and below in the general vicinity of the proposed eastern sedimentation basin should be textured high density polyethylene (HDPE).
 - Install geogrid reinforcement in the final cover section for acceptable seismic performance (*i.e.*, acceptable static factors of safety in excess of 1.5 and acceptable dynamic performance under MCE scenario where displacements are under an inch). If an alternative monolithic soil cover system is selected, acceptable seismic performance can be achieved without geogrid reinforcement.
 - The landfill liner should “daylight” (come to the surface) inboard of the proposed eastern sedimentation basin and liner slope in this area shall be no shallower than 1-3/4:1 (H:V).
 - Design the foundation subdrains and the LCRS drainage systems to maintain an acceptable drainage slope after 1.3 percent of differential settlement between the inboard “heel” of waste and the drainage sumps.
 - Repair the areas of toe scour from Coyote Creek along the northern perimeter levee and the slope face should be armored to prevent future scour events. The Regional Water Quality Control Board recommends that, whether or not the proposed project is approved, the property owner should assess the cause of the toe scour, as well as the potential impacts of the toe scour repair and armoring on the geomorphic stability of Coyote Creek, and modify the design of the measure accordingly. The analysis supporting the liquefaction improvement plan will address this issue to the satisfaction of the peer reviewers and the reviewing agencies, which include the Regional Board and the City’s Director of Planning.

As discussed previously, the potential for liquefaction-related slope stability failure is an existing condition, independent of the proposed project. With the completion of the above planned landfill improvements, the landfill would not result in substantial displacement from liquefaction-related slope stability. The proposed landfill height expansion would not result in significant liquefaction-related slope stability impacts.

Impact GEO – 3: The proposed landfill height expansion, with the implementation of the planned landfill slope stability improvements, would not result in significant liquefaction-related slope stability impacts. (**Less Than Significant Impact**)

Final Cover Stability

At the end of active landfilling at NISL, final closure of the site would require the placement of a final cover intended to minimize moisture infiltration into the waste and landfill gas escape from the landfill. The final cover, as required by the CCR for the unlined northern portions of the NISL would include, at minimum, a two-foot thick foundation layer, a one-foot thick low-hydraulic conductivity layer, and a one-foot thick vegetative layer. The final cover for lined portions of the NISL would include the placement of a flexible membrane liner. The cover section would include a one-foot thick foundation layer, a one-foot thick low-hydraulic conductivity layer, flexible membrane liner barrier layer, and a one-foot thick vegetative layer.

An analysis of the stability of prescriptive final cover systems placed over lined areas of the NISL after the end of active landfilling is included in Appendix E of this EIR and the results of the analysis indicate that a static safety factor of at least 1.55 for the final cover with an estimated seismically-induced displacement of less than an inch under an MCE event will be required. In order to achieve this performance, a high-strength geogrid⁷⁴ was included in the cover section. This small magnitude of displacement is considered acceptable since final cover repairs can be made relatively quickly as a part of the post-closure maintenance of the site. Due to their accessibility, seismically-induced deformations of landfill covers up to 36 inches are generally considered acceptable for the site. Per the CCR, alternatives to the prescriptive standard are allowed if equivalent performance can be demonstrated. Alternative covers that take advantage of the protection provided by deep rooting vegetation supported by soils with moderate permeability characteristics are becoming more common in practice for the closure of solid waste facilities, and yield a performance that is superior to the prescriptive standard cover. Stability analyses of a proposed alternative cover presented in Appendix E resulted in a static factor of safety of 3.20 and negligible seismically-induced deformation. The design of the final cover has not been determined at this time.⁷⁵ In summary, however, both the prescriptive and alternative cover designs analyzed provide acceptable static factors of safety in excess of 1.5, as well as acceptable dynamic performance under MCE scenario (*i.e.*, displacements under an inch). Therefore, the proposed project would not result in significant impacts related to final cover stability, whichever design alternative is selected.

Impact GEO – 4: The proposed project, with a final cover that has a safety factor of at least 1.55 with a calculated displacement of less than an inch under an MCE event, would not result in significant final cover stability impacts. **(Less Than Significant Impact)**

Consolidation Settlement of the Landfill Foundation

Analyses were completed to estimate the amount of consolidation settlement that the landfill foundation would experience under the weight of the overlying MSW. Since the existing MSW on the north side of the landfill has been in place for decades, and thus the foundation beneath this waste has largely consolidated, the analyses were performed assuming only the recent and proposed new

⁷⁴ A geogrid is a technology used to reinforce soils.

⁷⁵ The final cover is required to be designed by a registered civil engineer in accordance with state and federal regulations and constructed in accordance with an approved Final Closure Plan that is required to be submitted two years prior to the anticipated date of closure. This process is setup so that the latest in technology and engineering can be incorporated into the design just prior to actual installation of the final cover system. Since NISL is anticipated to close in 2025, it is more than two years prior to its closure date and therefore, the final design of the final cover has not been determined to date.

MSW loading at the south side of the landfill, which reaches up to the elevation of 245 feet (NGVD29). This MSW loading, which considers the extensive soil removals to construct the landfill liner, was approximated by a trapezoid 165 feet high and 1,800 feet wide at the base.

The results of the analyses show that consolidation settlement due to MSW loading of up to about elevation of 245 feet (NGVD29) is anticipated to result in about 13 feet of settlement at the maximum height of refuse and four feet of settlement at the leachate collection and removal system (LCRS) sump at the toe of the north-facing lined slope. The calculated differential settlement of 1.3 percent is well within the allowable strain capacity for the liner. Anticipating this settlement, current cell designs incorporate an average liner slope of about 1.8 percent, so a post-settlement slope of at least 0.5 percent will be maintained for leachate drainage. Based on the information obtained from the borings on the north side of the landfill, it is estimated that the differential settlement would likely be much less than 1.3 percent. For these reasons, it is not anticipated that the proposed height expansion would result in significant impacts related to the landfill foundation settlement.

Impact GEO – 5: The proposed project would not result in significant impacts related to landfill foundation settlement. **(Less Than Significant Impact)**

Tsunamis and Seiches

A tsunami is a sea wave generated by a large-scale sea floor displacement associated with large earthquakes, submarine landslides or volcanic activity which displaces a relatively large volume of water in a very short period of time. Seiches are defined as oscillations in a semi-confined body of water due to earthquake shaking or fault rupture.

The California Office of Emergency Services has estimated that a tsunami entering the Golden Gate could be as large as 33 feet, but that such a wave would only be about 10 percent as high (*i.e.*, about three feet) when it reached the southern San Francisco Bay. Since the NISL site itself is about five miles east of the main portion of the southern San Francisco Bay, the height of any tsunami reaching the site would be less than three feet. The Recyclery is located further from the San Francisco Bay than NISL; therefore, the height of any tsunami reaching the Recyclery would also be less than three feet. NISL and the Recyclery are protected from exterior inundation by a perimeter levee system. The perimeter levee is approximately 14 feet (NGVD29). As such, the threat of tsunami-induced damage to NISL and Recyclery facilities would not be significant.

Due to the limited stretch of open water adjacent to the project site, any seismically-induced seiche would be expected to be smaller than the worst-case tsunami discussed above. For this reason, the threat of seiche-induced damage to the NISL and the Recyclery would not be significant.

Impact GEO – 6: The proposed project would not result in significant tsunami or seiche impacts. **(Less Than Significant Impact)**

3.7.3 Mitigation and Avoidance Measures

The project proponent proposes to implement the following mitigation measure to reduce geological impacts from construction and development or relocation of buildings or structures on the site to a less than significant level:

MM GEO – 1.1: In order to construct or relocate buildings or structures anywhere on the project site, a design-level geotechnical report by a qualified professional that documents testing of conditions on the site shall be prepared prior to the approval of a at the PD Permit or PD Permit amendment for any such structure or relocation stage to the satisfaction of both the Director of Planning, Building, and Code Enforcement and the City Geologist.

Specifically for building proposed on the D-shaped area, the design-level geotechnical study shall a) identify the extent of the potentially liquefiable soils by completing closely spaced CPT soundings to more accurately locate potentially liquefiable soils, and b) identify the necessary measures needed to avoid and/or mitigate liquefaction impacts, in accordance with local building codes. Possible measures include deep soil mixing, jet grouting, dynamic deep compaction, removal and replacement, vibrocompaction/vibroreplacement, and/or in-situ cementitious shear panels.

3.7.4 Conclusion

- Impact GEO – 1:** The construction and development of buildings and/or structures on the site, with the implementation of the above mitigation measure, would not result in significant geological impacts. **(Less Than Significant Impact with Mitigation Incorporated)**
- Impact GEO – 2:** The proposed project would not result in significant impacts related to seismically induced settlement. **(Less Than Significant Impact)**
- Impact GEO – 3:** The proposed landfill height expansion, with the implementation of the planned landfill slope stability improvements, would not result in significant liquefaction-related slope stability impacts. **(Less Than Significant Impact)**
- Impact GEO – 4:** The proposed project, with a final cover that has a safety factor of at least 1.55 with a calculated displacement of less than an inch under an MCE event, would not experience significant final cover stability impacts. **(Less Than Significant Impact)**
- Impact GEO – 5:** The proposed project would not result in significant impacts from landfill foundation settlement. **(Less Than Significant Impact)**
- Impact GEO – 6:** The proposed project would not result in significant tsunami or seiche impacts. **(Less Than Significant Impact)**

3.8 HYDROLOGY AND WATER QUALITY

3.8.1 Setting

3.8.1.1 *Flooding*

The project site is located within an area that was once tidal marshlands that drained into San Francisco Bay. The site is adjacent to Coyote Creek, which curves along the eastern perimeter of the site. The Federal Emergency Management Agency (FEMA) has not printed a Flood Insurance Rate Map (FIRM) for the project site; however, the FIRM index indicates that the project site is located in the FEMA 100-year flood zone, A1, with a predicted 100-year flood elevation of nine feet (NGVD29).

The project site is also located within an area of potential tidal flooding. The level of tidal flooding in the Alviso area is nine feet (NGVD29).⁷⁶

NISL and the Recyclery are protected from exterior floodwater inundation, run-on, and tidal waters by a perimeter levee system. The perimeter levee, the top of which is approximately 14 feet (NGVD29) adjacent to Coyote Creek, protects NISL and the Recyclery from the 100-year flood with a design flood stage of nine feet (NGVD29) and from tidal influences. Other areas of the perimeter levee vary from 12.5 feet to 22.5 feet (NGVD29). The landfill has not flooded in several decades, according to the property owners.

The US Army Corps of Engineers (Corps), along with the Santa Clara Valley Water District (SCVWD), California State Coastal Conservancy, U.S. Fish and Wildlife Service, and other local agencies, are currently working to complete the South San Francisco Bay Shoreline Study. This study will identify and recommend one or more projects for flood damage reduction, ecosystem restoration, and related purposes such as public access. The study will be performed through several “Interim Feasibility Studies.” Various flood protection strategies will be examined in the study, such as increasing flood capacities of local creeks by widening the mouths of waterways, reestablishing historical flood plains, and constructing levees. Flood protection improvements that would be implemented as a result of this study are unknown at this time.

3.8.1.2 *Drainage*

The project site (NISL and the Recyclery) are not connected to the City’s storm drain system and runoff from the site is not conveyed to the City’s storm drain system.

NISL

Groundwater in the landfill vicinity flows west towards the San Francisco Bay. However, due to the groundwater pumping from the underdrain and leachate collection wells, groundwater beneath the landfill generally flows towards the center of the site, resulting in an inward gradient.

The northern portions of the landfill have been graded to direct surface stormwater flow to drainage swales and ditches that eventually flow to the adjacent Coyote Creek.⁷⁷ Hay is also placed around the northern perimeter of the landfill to catch sediments in the runoff before it flows to Coyote Creek

⁷⁶ City of San José. Alviso Master Plan Final Environmental Impact Report. November 1998.

⁷⁷ International Disposal Corporation. Joint Technical Document Permit No. 43-AN-003. February 2007. P. 3-4.

(if needed). Stormwater runoff from the compost windrow areas is conveyed via drainage swales and ditches to adjacent compost stormwater retention ponds, located at the west end of the site and immediately east of the main stormwater retention pond (see Figure 1.0-6). The combined capacity of the compost stormwater retention ponds is 13 acre feet. Water from the ~~from the~~ compost stormwater retention ponds (see Figure 1.0-6) is used to water the compost windrows or for dust control on the compost windrow pads and internal roads in the composting area. The runoff from the composting area in the compost retention ponds is not tested as it is contained in a closed-loop system. No compost runoff is discharged from the site. Stormwater from the C&D recycling area (CST-2) flows to the main stormwater retention pond where it is pumped into South Coyote Slough south and west of the site.

Stormwater runoff from the working face of the landfill (called “contact water”) is collected separately via drainage swales and ditches and pumped into the leachate holding tanks. The leachate is loaded on trucks and disposed of at the WPCP.

Runoff from the D-shaped area of the landfill is conveyed to vegetated swales, which are the same swales that receive runoff from the Recyclery. These swales are designed to provide removal of total suspended solids as the water flows towards the main stormwater retention pond and are periodically maintained.

The stormwater management system at NISL is capable of handling the runoff resulting from a 24-hour, 100-year storm. Peak flows to Coyote Creek during a 24-hour, 100-year precipitation event is calculated to be approximately 204 cubic feet per second, with a total flow of 23 acre-feet. Groundwater from the Subtitle D subdrain system under the currently active landfill area represents approximately five acre-feet annually, or less than 1/1000 of an acre foot during a 24-hour period. The total volume of the main stormwater retention pond, which is located south of the landfill maintenance building on Figure 1.0-6, is a maximum of 69 acre feet. This volume is sufficient to hold the calculated runoff of 23 acre-feet from the 24-hour, 100-year precipitation event plus the groundwater from the subdrain system. The peak inflow to the main stormwater retention pond from the 24-hour, 100-year precipitation event is calculated to be 309 cubic feet per second.

The Recyclery

Stormwater from the Recyclery and the adjacent paved areas runs into an on-site storm drain system which flows by gravity to a lift station located along the southern perimeter of the Recyclery. The lift station pumps water up into vegetated swales located along the north side of the main access road on either side of the landfill gas flare station. As mentioned above, these same swales also receive all runoff from the D-shaped area.

All runoff from the Recyclery area is conveyed to the main stormwater retention pond, along with all other runoff from active areas of the site, and is pumped over the site’s perimeter berm to South Coyote Slough.

Ground green waste is used to absorb any runoff from the food waste located on the paved tipping areas on the outdoor paved areas at the Recyclery. The green waste/food waste mixture is then transferred to the compost pad for inclusion in the landfill’s composting operation. All runoff from composting operations is collected in a closed-loop water management system which stores and circulates water back into the compost windrows. No runoff from composting operations is discharged from the site.

3.8.1.3 Water Quality

Regulatory Framework

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality. Regulations set forth by the United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. USEPA's regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the United States (*e.g.*, streams, lakes, bays, etc.). These regulations are implemented at the regional level by water quality control boards, which for the San José area is the San Francisco Bay Regional Water Quality Control Board (RWQCB).⁷⁸

The SWRCB has implemented a National Pollution Discharge Elimination System (NPDES) general construction permit for the Santa Clara Valley. For properties of one (1) or more acres, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. Subsequent to implementation of the general construction permit, the San Francisco Bay RWQCB issued a Municipal Storm Water NPDES Permit to the municipalities in Santa Clara Valley, the County of Santa Clara, and the Santa Clara Valley Water District (SCVWD) as co-permittees. The Santa Clara Valley Urban Runoff Prevention Program (SCVURPPP) assists the co-permittees in implementing the provisions of this permit.

In October 2001, the RWQCB approved an amendment to the NPDES Permit Number CAS 029718, Provision C.3. This amendment, which is commonly referred to as "C3" requires all new and redevelopment projects that result in the addition or replacement of impervious surfaces totaling 10,000 square feet or more to 1) include stormwater treatment measures; 2) ensure that the treatment measures be designed to treat an optimal volume or flow of stormwater runoff from the project site; and 3) ensure that stormwater treatment measures are properly installed, operated, and maintained.

The RWQCB is currently proposing to unite the nine Bay Area counties and approximately 90+ municipalities under one Stormwater Management Municipal Regional Permit (MRP) to establish region-wide consistency in the implementation of post-construction urban runoff and hydromodification management. If adopted by the RWQCB, the proposed MRP would become effective on July 1, 2010 and would be effective for five years. If a project is approved after the approval of the proposed MRP, the project would be required to comply with the new MRP.

As discussed previously, runoff from the Recyclery is conveyed to the main stormwater detention pond at the landfill. NISL has its own NPDES General Permit. In compliance with the landfill's NPDES General Permit, the landfill's SWPPP identifies sources of stormwater pollution and management practices to minimize pollution in stormwater discharge from the landfill. The landfill facility includes structural and non-structural control measures to reduce pollutants in stormwater runoff. The structural control measures include roofing, berms and earthen dikes, drains and

⁷⁸ Historically, efforts to prevent water pollution have focused on "point" sources, meaning the source of the discharge was from a single location (*e.g.*, a sewer treatment plant, power plant, factory, etc.). Recent efforts are focusing on pollution caused by "non-point" sources, meaning the discharge comes from multiple locations. The best example of this latter category is urban runoff, the source of which is a myriad of surfaces (*e.g.*, roadways, rooftops, parking lots, etc.) that are found in a typical city.

underground piping, drainage swales, silt fences, hay waddles, gravel layers, and retention ponds. The non-structural control measures include housekeeping measures, spill response procedures, security, mulches and vegetative cover, and visual inspections.

City of San José Post-Construction Urban Runoff Management Policy 6-29

The City of San José's adopted Council Policy No. 6-29 implements Provision C.3 of the NPDES Permit by requiring all new and redevelopment projects to implement Post-Construction Best Management Practices (BMPs)⁷⁹ and Treatment Control Measures (TCMs)⁸⁰ to the maximum extent practicable. The threshold for requiring numerically sized Post-Construction TCMs is any project that creates, adds, or replaces 10,000 square feet or more of impervious surface. Projects that do not convey runoff into the City's storm drain system are not subject to this Policy.

City of San José Post-Construction Hydromodification Management Policy 8-14

Policy 8-14 requires stormwater discharges from new and redevelopment projects that create or replace one acre (43,560 square feet) or more of impervious surfaces to be designed and built to control project-related hydromodification, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. The Policy establishes specified performance criteria for Post-Construction Hydromodification control measures (HCMs) and identifies projects which are exempt from HCM requirements. For example, projects are exempt that do not increase the impervious area of a site, as are projects that drain to exempt channels, projects that drain to stream channels within the tidally influenced area, or projects that drain to non-earthen stream channels that are hardened on three sides and extend continuously upstream from the tidally influenced area. Projects that do not convey runoff into the City's storm drain system are not subject to this Policy.

NISL

NISL is at the southern extremity of the Niles Groundwater Subarea, which is part of the extensive Fremont Groundwater Area. The major water bearing formations underlying the site are a perched water table (less than 20 feet below the natural ground surface), the Newark Aquifer (approximately 90 to 110 feet below ground level), and the Centerville Aquifer (approximately 200 to 250 feet below ground).

Groundwater at the NISL is monitored in accordance with 40 Code of Federal Regulations (CFR) 258.50-58 (Subtitle D), and the requirements of the Regional Water Quality Control Board. NISL is at the southerly extremity of the Niles Groundwater Subarea, which is part of the extensive Fremont Groundwater Area. The groundwater monitoring system at the landfill consists of one upgradient

⁷⁹ Post-Construction Best Management Practices (BMPs) are methods, activities, maintenance procedures, or other management practices designed to reduce the amount of stormwater pollutant loading from a site. Examples of Post-Construction BMPs include proper materials storage and housekeeping activities, public and employee education programs, and storm inlet maintenance and stenciling.

⁸⁰ Post-Construction Treatment Control Measures are: site design measures, landscape characteristics or permanent stormwater pollution prevention devices installed and maintained as part of a new development or redevelopment project to reduce stormwater pollution loading from the site; are installed as part of a new development or redevelopment project; and are maintained in place after construction has been completed. Examples of runoff treatment control measures include filtration and infiltration devices (*e.g.*, vegetative swales/biofilters, insert filters, and oil/water separators) or detention/retention measures (*e.g.*, detention/retention ponds). Post-Construction TCMs are a category of BMPs.

groundwater monitoring well, 11 down-gradient groundwater monitoring wells, and five groundwater monitoring wells and four piezometers that are used to measure groundwater/leachate levels underlying the site.

All surface water at the landfill, including stormwater runoff and collected subdrain water, is managed and monitored in accordance with the landfill Self Monitoring Program (SMP) that was approved by the RWQCB. The surface water is monitored at the stormwater retention pond south of the maintenance building, at Coyote Creek just east of the D-shaped area, and at South Coyote Slough just south of the stormwater ~~water~~ retention pond. The water collected in the retention pond is tested quarterly and discharged as needed. Because the retention pond is located below sea level, the collected stormwater is pumped to discharge it off-site into South Coyote Slough. The routine procedure for maintaining adequate freeboard in the retention pond includes pumping at a frequency and rate that will keep up with incoming stormwater. If a greater than 24-hour, 100-year storm event occurs, the pumps at the pond run more frequently to remove the collected runoff. If necessary, additional pumps are added to maintain collection and runoff control. If there is a power failure, the landfill uses portable generators to run the pumps. In the past, the water was tested prior to each discharge. However, after a series of clean tests, the “per-event” testing was modified to quarterly. Note that in 2006, a leachate seep was observed and reported to the RWQCB. The seep was repaired and a letter summarizing the leak and repair was sent to the RWQCB.⁸¹ A copy of the SMP is included in the JTD, which is on file with the City of San José Department of Planning, Building, and Code Enforcement and can be viewed during normal business hours. The JTD is also on file with the LEA, the San Francisco Bay RWQCB, and the CIWMB (now CalRecycle).

Leachate

Leachate is water or liquid that has percolated through solid waste that contains traces of materials (dissolved or suspended) from it. Leachate is typically caused by moisture which is already in the waste, or by surface water, ground water or precipitation reaching the waste. Leachate generated on-site is currently collected in two sets of enclosed sumps. Leachate from all sumps is pumped to storage tanks located adjacent to the landfill maintenance shop (refer to Figure 1.0-6), where it is loaded into tanker trucks for transport to the WPCP for treatment and disposal. The site currently generates leachate at an average rate of approximately 19,335 gallons per day. According to Allied Waste, the leachate collection system is sufficiently sized to collect and remove all leachate generated from the landfill. The Waste Discharge Requirement (WDR) for the landfill outlines the site’s leachate collection and removal system, including system configuration, operations, and monitoring data. NISL submits a Report of Waste Discharge. The WDR is submitted to the San Francisco Regional Water Quality Control Board for review (RWQCB) and the RWQCB issues the WDR in response to the Report of Waste Discharge. State regulations require that the leachate system is adequately sized.

There are seven leachate-monitoring wells located in the northern portion of the site. The leachate monitoring wells are currently only used to measure leachate levels on a quarterly basis. Leachate currently meets the pretreatment standards mandated by the WPCP, therefore it is not treated at NISL.

To protect the public from coming in contact with leachate, most of the leachate collection and removal system (LCRS) is located below ground and the leachate holding tank area is restricted from public access. The long-term leachate management plan is to have the leachate directly piped to the

⁸¹ Shaw Environmental. Newby Island Landfill, North Perimeter Levee Slope Repair. 16 January 2007.

WPCP in an existing pipeline between the site and the WPCP, which would eliminate the need for trucking.

The Recyclery

As discussed previously, stormwater from the Recyclery is conveyed to vegetated swales. The swales are designed to provide removal of total suspended solids, oil and grease, total petroleum hydrocarbons, and particulate metals by settlement and filtration through vegetation as the water flows west toward the site's main stormwater retention pond. Sediment is removed periodically as needed to maintain pollutant removal effectiveness.

Best management practices (BMPs) are implemented in the Recyclery facility to prevent introduction of pollutants into the stormwater system. These BMPs include minimizing outdoor storage of materials, performing as much equipment maintenance inside buildings as possible, performing dry sweep clean-up methods for leaking fluids, and using filtration devices at the drop inlets. In addition, a street sweeper is periodically used to clean the outdoor areas of the Recyclery.

Before each rainy season, a major maintenance event is scheduled, including servicing of the lift station pumps, using a vacuum truck to clear collected sediment and debris from the drop inlets and the bottom of the lift station sump, and refreshing inlet filters. In addition, the compost deck area is covered with gravel to minimize erosion and silt transport to the compost retention ponds.

Additional maintenance is performed as needed during the rainy season. The systems are monitored and maintained by a combination of site employees and contractors, according to the skills required for the task. These activities are directed by the general manager responsible for Recyclery operations. The above described drainage maintenance program is ongoing and would continue under the proposed project.

As stated above, all runoff from the Recyclery area (including the food waste area) is conveyed to the main stormwater retention pond, along with all other runoff from active areas of the site, where it settles and is pumped over the site's perimeter berm to South Coyote Slough. The pump's inlet is suspended below the water surface to prevent direct transfer of any oil/grease sheen to South Coyote Slough, and to prevent discharge of collected pond bottom sediment. Observations of the pond are conducted for sheens and other visible contaminants at least bi-monthly during the rainy season, and at least monthly during the dry season. The water is sampled quarterly under the site's Waste Discharge Requirements (WDR - RWQCB permit for landfills) and the General Industrial NPDES Storm Water permit. The testing program screens for basic properties like pH, electrical conductivity, and specific chemical constituents listed in the permits, and requires periodic fish bioassay testing. Parameters used to determine acceptability for discharge are: 1) USEPA storm water limits for total suspended solids, iron, and pH; 2) non-detect for organic chemicals; and 3) 100 percent survival of fish in bioassay.

Ground green waste is used to absorb runoff from the food waste located on the paved tipping areas at the Recyclery. The green waste/food waste mixture is then transferred to the compost pad at the landfill for inclusion in the site's composting operation. All runoff from composting operations is collected in a closed-loop water management system which stores and circulates water back into the compost windrows.

3.8.2 Hydrology and Water Quality Impacts

3.8.2.1 *Thresholds of Significance*

For the purposes of this project, a hydrology and water quality impact is considered significant if the project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

3.8.2.2 *Discussion of Impacts*

The project proposes to increase the maximum allowable height of the landfill from 150 to 245 feet (NGVD29). The project proposes other physical changes including relocation of existing uses, possible construction of permanent buildings to replace the office trailers, and implementation of possible operational or physical changes some of which may be necessary to comply with existing and new regulations (refer to **Section 1.0 Description of the Project** for more detail). Some of the entitlements requested are to include existing uses in the proposed PD zoning and subsequent PD Permits.

Flooding

As discussed previously, the project site is located within a 100-year flood zone and is subject to tidal flooding. The existing perimeter levee system protects NISL from the 100-year flood with a design stage of nine feet (NGVD29) and from tidal influences. New information continues to be developed regarding the effects of Global Climate Change and sea level rise on flooding adjacent to San Francisco Bay. Any plan for flood protection for the landfill will be required to reflect the most current information available at the time the Planned Development Permit is issued by the Director of Planning, Building and Code Enforcement, including provision for regular updates to the landfill's

flood protection plan. The project does not currently propose any change in the levee heights, but changes may be required to levee heights in the future (refer to the discussion in Section 6.5.3.1 starting on page 220 of the Draft EIR). The project would not result in significant flooding impacts.

Impact HYD – 1: The proposed project would not result in significant flooding impacts. **(Less Than Significant Impact)**

Drainage

The project proposes an increase in landfill height but does not propose to increase the footprint of the landfill. The project proposes to relocate a number of existing uses on-site and possibly construct new offices to replace some or all of the existing office trailers. Runoff from the project site will continue to be collected and diverted as it is under existing conditions, except that runoff conveyed to the existing main stormwater retention pond would be diverted to two new ponds located both east and west of the existing pond (see sedimentation basins on Figure 1.0-10). The stormwater collected in each pond would still be pumped to South Coyote Slough. New stormwater lines will be laid to transport stormwater to the ponds. In addition, consistent with Best Management Practices, the landfill will increase the amount of runoff being diverted to the retention basins (e.g., instead of runoff from the northern portion of the landfill flowing directly to the creek, the runoff would be directed to a retention basin first). For this reason, at ultimate buildout of the stormwater management system, the retention pond capacity would increase from 69 to 87 acre feet.

Because of the nature of the use, virtually all water that falls on the site runs off. Even the water that percolates into the landfill mass is collected in subsurface drains. Therefore, the proposed height increase, relocation of existing uses, the replacement of existing office trailers with permanent buildings, and the diversion of runoff from the existing main stormwater retention pond to two new ponds would not result in a substantial change to the drainage pattern on the site, or increase in surface runoff from the site.

In addition, the new stormwater management system (two new ponds and stormwater lines) would be designed to the same performance level as the existing stormwater management system and will be able to handle a 24-hour, 100-year storm. The new ponds will be constructed above sea level and will gravity feed to off-site discharge. If necessary, pumps may be employed to augment gravity flow in the event of a greater than 24-hour, 100-year storm event occurs. If there is a power failure, the landfill would use portable generators to run the pumps. Although there is an existing City of Milpitas stormwater line near the site, there is no proposal to connect to it.

Impact HYD – 2: The proposed project would not result in significant drainage impacts. **(Less Than Significant Impact)**

Water Quality

Most of the project site is impervious (none of the D-shaped area is paved). The project proposes the relocation of existing operations on-site and may include the replacement of existing office trailers with permanent buildings. In addition, runoff would be diverted to two new ponds located both east and west of the existing pond (see sedimentation basins on Figure 1.0-10). Runoff from the areas of the project site that would be affected from the relocation of uses, new paving (D-shaped area), and replacement of trailers would be collected and diverted to the two proposed stormwater detention ponds where it would be pumped to South Coyote Slough.

With the increase in landfill height, the velocity of the runoff from that portion of the site could increase. This may result in increased erosion.

Leachate

The proposed project allows the relocation of the leachate holding tanks and ancillary facilities from their existing location west of the maintenance shops to the D-shaped area. Also, as discussed previously, the long-term leachate management plan is to connect to the adjacent pipeline to the WPCP.

The landfill's continued compliance with their NPDES General Permit and implementation of their SWPPP to minimize and reduce erosion, pollutants in stormwater runoff, and pollution in stormwater discharge would result in less than significant water quality impacts. According to the landfill's consulting engineer, as areas of the landfill are filled, drainage swales, ditches, berms, and piping are constructed and maintained to prevent ponding on-site and to control runoff and erosion. Unpaved roads are graded to assist in water sheeting and flow. According to the landfill operator, the interior drainage system is and will continue to be maintained to be clear of sediment or debris. On intermediate slopes, temporary overside drains (overside drains consist of various types of pipes, flumes, and lined ditches) that extend from the top of a slope to the bottom of a slope are used to convey surface run-off to drainage swales to minimize erosion. At final buildout of the landfill, similar drainage and erosion control measures would be employed, but they would be permanent rather than temporary and transitional in nature. Vegetation on final fill slopes would be used for erosion control. In addition to the above, waddles, silt fences, and other measures would be used as needed in designated areas until vegetation or other more permanent erosion control measures are established. The landfill's SWPPP will be revised accordingly if the proposed project is approved.

Since runoff from the project site (NISL and the Recyclery) is not conveyed to the City's storm drain system, the project's is not subject to City policies 6-29 or 8-14.

Impact HYD – 3: The proposed project, in compliance with the site's NPDES General Permit and SWPPP, would not result in significant water quality impacts from erosion and stormwater runoff pollution. **(Less Than Significant Impact)**

3.8.3 Mitigation and/or Avoidance Measures

No mitigation is required or proposed.

3.8.4 Conclusion

Impact HYD – 1: The proposed project would not result in significant flooding impacts. **(Less Than Significant Impact)**

Impact HYD – 2: The proposed project would not result in significant drainage impacts. **(Less Than Significant Impact)**

Impact HYD – 3: The proposed project, in compliance with the site's NPDES General Permit and SWPPP, would not result in significant water quality impacts from erosion and stormwater runoff pollution. **(Less Than Significant Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

3.9.1 Setting

NISL has been used as a landfill since the 1930s. Between 1931 and 1956, the disposal and incineration of solid waste took place in select northern and eastern portions of the landfill. After 1956, burning was discontinued and subsequent waste disposal practices were more conventional.⁸² The specific make-up of all the buried waste on the landfill is unknown. Up until the mid-1960's, the D-shaped area was used as a burn dump after which additional fill material was placed on the area. The fill material that covers the D-shaped area may contain some hazardous materials. While no evidence of their presence has been found during previous testing, the D-shaped area was used as a burn dump and for landfilling for over 70 years, and the specific make-up of all the buried waste on the D-shaped area is unknown.⁸³

As discussed in **Section 3.8 Hydrology and Water Quality**, the groundwater at the NISL is monitored through a groundwater monitoring system consisting of one upgradient groundwater monitoring well, 11 down-gradient groundwater monitoring wells, and five groundwater monitoring wells and four piezometers that are used to measure groundwater/leachate levels underlying the site. All surface water at the landfill, including stormwater runoff and collected subdrain water, is managed and monitored in accordance with the landfill SMP that was approved by the RWQCB.⁸⁴ The surface water is monitored at the main stormwater retention pond south of the maintenance building, at Coyote Creek just east of the D-shaped area, and at South Coyote Slough just south of the stormwater water retention pond. The water collected in the retention pond is tested quarterly and discharged as needed. In the past, the water was tested prior to each discharge. However, after a series of clean tests, the “per-event” testing of the main stormwater retention pond was modified to quarterly.

Table 3.9-1 shows the groundwater test results from 2008. The groundwater at the site is brackish or sea water and not intended to be used as drinking water. However, for comparison purposes, the concentrations of analytes detected in the groundwater are compared to the California Environmental Protection Agency (CalEPA) Maximum Contaminant Levels (MCLs) for drinking water, as well as the CalEPA/San Francisco RWQCB Environmental Screening Levels (ESLs) for non-drinking water. MCLs are the highest levels of contaminants that are allowed in drinking water, and ESLs are the maximum levels of chemicals allowed that would not pose a significant, long-term (chronic) threat to human health and the environment. The ESLs are considered to be conservative. The presence of a chemical at a concentration above its ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; rather, it indicates that impacts may exist and that additional evaluation may be needed.

⁸² GeoLogic Associates. Geotechnical Evaluation for Proposed Vertical Expansion Newby Island Landfill. June 2008. Page 1.

⁸³ City of San José. Draft Environmental Impact Report for the Newby Island General Plan Amendments and Planned Development Rezoning. May 2002.

⁸⁴ A copy of the SMP is included in the JTD, which is on file with the City of San José Department of Planning, Building, and Code Enforcement and can be viewed during normal business hours. The JTD is also on file with the Local Enforcement Agency, the San Francisco Bay Regional Water Quality Control Board, and the California Integrated Waste Management Board.

As shown in Table 3.9-1, only concentrations of barium, lead, and nickel were detected above both their respective MCLs and ESLs. The laboratory detection limits for beryllium is greater than its MCL and ESL, therefore, it is unknown whether concentrations of beryllium are above its respective MCL and/or ESL.

The three metals detected above their respective MCLs or ESL are naturally occurring elements and therefore, background concentrations of these elements can occur above their respective MCL or ESL. The primary concern in sampling the groundwater at the site is to confirm that leachate from the landfill is not leaking into the groundwater and contaminating it. Table 3.9-2 compares the measured concentrations of barium, lead, and nickel to the concentration of these metals in recent leachate samples. As shown in Table 3.9-2, the concentrations of all three metals in the sampled groundwater are above their concentrations in leachate; therefore, it was concluded by *GeoLogic Associates*, the landfill's geotechnical and environmental consultant, that the concentrations of these three metals in the groundwater are naturally occurring rather than related to the landfill.

Table 3.9-1: 2008 NISL Groundwater Quality Monitoring Results				
Analyte	Detected Concentrations	CalEPA Maximum Contaminant Level (MCL) for Drinking Water	CalEPA/RWQCB Environmental Screening Level (ESL) for Non-Drinking Water	Detected Concentrations exceed MCL and ESL?
	(milligrams per liter)			
Aluminum	0.028-0.030	0.2	NA	No
Antimony	<0.014	0.006	0.030	No
Arsenic	<0.0082-0.037	0.05	0.036	No
Barium	0.038-2.000	1	1	Yes
Beryllium	<0.0011-<0.022	0.004	0.00053	Unknown
Cadmium	<0.0014-0.0026	0.005	0.00025	No
Chromium	<0.0023-0.120	0.05	0.18	No
Copper	<0.0014-0.230	1	0.0031	No
Cyanide	<0.0032-0.0064	0.15	0.001	No
Lead	<0.0053-0.320	0.015	0.000025	Yes
Mercury	<0.000016-0.0010	0.002	0.002	No
Nickel	0.0073-0.240	0.1	0.0082	Yes
Nitrate as N	<0.18-1.8	10	NA	No
Selenium	<0.0025-0.025	0.05	0.005	No
Thallium	<0.00054-<0.0011	0.002	0.004	No

Table 3.9-2: Summary of Analytes Exceeding MCLs and ESLs in Comparison to Concentrations in Leachate			
Analyte	Detected Concentrations	Concentration in Leachate	Detected Concentrations Above Leachate Concentration?
Barium	0.038-2.000	0.189	Yes
Lead	<0.0053-0.320	0.00067	Yes
Nickel	0.0073-0.240	0.039	Yes

Table 3.9-3 shows the surface water test results from 2008 in comparison to MCLs for drinking water and ESLs for surface water used for estuarine habitats. The surface water is not intended to be used as drinking water. As shown in Table 3.9-3, none of the tested analytes were detected above their respective MCL and ESL.

Table 3.9-3: 2008 NISL Surface Water Quality Monitoring Results				
Analyte	Detected Concentrations	CalEPA Maximum Contaminant Level (MCL) for Drinking Water	CalEPA/ RWQCB Surface Water Environmental Screening Level (ESL) for Estuarine Habitats	Detected Concentrations exceed MCL <u>and</u> ESL?
	(milligrams per liter)			
Antimony	<0.014	0.006	0.030	No
Arsenic	0.0018-0.017	0.05	0.00014	No
Barium	0.050-0.100	1	1	No
Beryllium	<0.0011	0.004	0.00053	No
Cadmium	<0.0014	0.005	0.00025	No
Chromium	<0.0023	0.05	0.18	No
Copper	0.0015-0.0031	1	0.0031	No
Cyanide	<0.0032-0.0095	0.15	0.001	No
Dibromochloromethane	<0.00025-0.0041	0.0002	0.046	No
Lead	0.00026-0.0016	0.015	0.0025	No
Mercury	<0.000022-0.000032	0.002	0.000025	No
Nickel	0.0041-0.011	0.1	0.0082	No
Nitrate as N	<0.90-3.1	10	NA	No
Selenium	0.0030-0.030	0.05	0.005	No
Thallium	<0.000054- <0.00022	0.002	0.004	No

The project site is on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 known as the Cortese List. The Cortese List is maintained by the Department of Toxic Substances Control (DTSC), the SWRCB, the Santa Clara County leaking underground storage tank program, and CIWMB. The project site is listed by the SWRCB and CIWMB as a solid waste landfill. The project site, specifically the Recyclery, was listed in the County of Santa Clara's databases for leaking underground storage tanks (USTs) for a former leaking UST. This case was closed in 1993.

The nearest airports to the project site are the Mineta San José International Airport (over five miles south of the site), Moffett Field (about six miles southwest of the site), and Reid Hillview Airport (about 10 miles southeast of the site). The project site is not located within an airport land use plan. No schools are located within one quarter mile of the project site. According to the California

Department of Forestry and Fire Protection fire threat map, the project site is not located in a wildfire threat zone.⁸⁵

3.9.1.1 NISL

Materials Accepted

NISL is currently the primary solid waste disposal site for the cities of San José, Milpitas, Santa Clara, Cupertino, Los Altos, and Los Altos Hills. A description of waste types accepted, or not accepted, at NISL is provided below.

General wastes, which are non-hazardous solid wastes that do not require special handling prior to disposal, are accepted at NISL and include mixed municipal wastes (from residential and commercial uses), industrial wastes, agricultural wastes, and construction/demolition wastes. High liquid content wastes, which are wastes that contain greater than 50 percent water by weight, are not accepted at NISL except that disposal of sludges in the lined areas of the landfill with a leachate collection and recovery system (LCRS) is allowed providing they contain at least 20 percent solids if primary sludges, or at least 15 percent solids if secondary sludges.

NISL also accepts the following non-hazardous waste and universal wastes for recycling, beneficial use, or disposal as indicated:

- Tires – recycling,
- Car batteries – recycling,
- CRT units (*i.e.*, computer monitor or terminal that includes a cathode-ray tube) – recycling,
- Low-level contaminated soils – beneficial use or disposal,
- Dredged soils – beneficial use or disposal,
- Recyclable construction/demolition material – recycling, and
- Other recyclables (white goods, carpet, scrap metal, cardboard, and other paper products) – recycling.

Designated wastes and hazardous wastes are not accepted at NISL. Additional details regarding the handling procedures at NISL for the above described and listed wastes are included in the JTD. A copy of the SMP is included in the JTD, which is on file with the City of San José Department of Planning, Building, and Code Enforcement and can be viewed during normal business hours. The JTD is also on file with the LEA, the San Francisco Bay RWQCB, and the CIWMB.

Current permits allow an annual average of 3,260 tpd of waste to be disposed at NISL and a maximum of 4,000 tons of waste on any one operating day. Since 1998, waste quantities disposed have varied from an average of 2,560 tpd in 1998 to 2,089 tpd in 2002. Since 1990, disposal volumes received at NISL have dropped steadily to their current level due to increased recycling, beneficial use, and other diversion, and reduction efforts; however, waste volumes received may increase in the future as other landfills in the area close and more waste is directed to NISL. Operators of NISL anticipate that the annual average disposal level of 3,260 tpd of waste will be achieved within the next five years. The proposed limitation on numbers of vehicles hauling materials through the gate would still be in effect, however.

⁸⁵ California Department of Forestry and Fire Protection. Wildfire Hazard Map. Association of Bay Area Governments. March 2007. Available at: <http://www.abag.ca.gov/bayarea/eqmaps/wildfire/>.

The current permitted daily tonnage limits equate to a maximum of 1,017,120 tons of waste disposal per year (assuming 312 operating days per year).

Materials On-Site

Fueling Facilities and Hazardous Materials

There is an 8,000-gallon above ground diesel fueling station located in the central portion of the landfill near the C&D recycling area. The tank is used to fuel on-site equipment and to refill a 2,500-gallon diesel dispensing truck. Site vehicles are fueled at a 500-gallon above-ground unleaded fueling station located near the landfill maintenance building.

Hazardous materials collected during load checking and found on the working face are stored in a special container near the C&D recycling area. Other hazardous materials used or generated on-site are stored in tanker trucks and in double contained tanks (to prevent accidental leakage) in the landfill maintenance shop, in accordance with the site's Hazardous Materials Management Plan (HMMP).

Leachate

Leachate from sumps on the landfill is pumped into mobile storage tanks currently located adjacent to the landfill maintenance shop in the center of the landfill. The storage tanks are then loaded into tanker trucks for transport to a permitted treatment plant. The site currently generates leachate at an average of approximately 7.4 million gallons per year (2006).

Landfill Gas

For air quality purposes, landfill gas is properly managed or destroyed. GRS currently operates an electric power generating facility on the southeastern portion of the landfill that collects landfill gas through a system of wells and headers and uses it to generate electricity. Some of the gas is compressed and exported to the WPCP for use in wastewater treatment operations. The landfill gas is used to fuel reciprocating motors that provide compressed air needed by the WPCP. In addition, there are two landfill gas destruction flares as back-up to the GRS facility that are located near the westernmost point of the D-shaped area.

Perimeter and surface landfill gas monitoring are completed on a quarterly basis. The monitoring found no indication of landfill gas migration off-site.

3.9.1.2 *The Recyclery*

Materials Accepted

The Recyclery processes source separated recyclables including paper, glass, plastics, metals, wood, green waste, and mixed commercial recyclables (*e.g.*, mixed paper, newspaper, office paper, plastic, glass, and aluminum). Green materials include yard trimmings, plant waste, non-animal food waste from processing industry, manure, untreated wood waste, paper products, and natural fiber products.

The Recyclery does not receive or process MSW. The current zoning and City permit for the Recyclery does not allow MSW. There is no evidence that environmental review has been

completed for the Recyclery to receive or process MSW. Additional environmental review would be required for the Recyclery to receive or process MSW. In addition, the Recyclery does not accept non-hazardous industrial wastes (*i.e.*, wastes that have physical properties which could cause health and safety or operational problems without special handling), construction/demolition wastes, high liquid content wastes, designated wastes, hazardous wastes, or other wastes requiring special handling. Food waste and manure are not allowed under the existing zoning. The Recyclery does not accept animal materials for composting.⁸⁶

Materials coming into the Recyclery are inspected and if prohibited materials are identified, they may be returned to the generator. Also, if contaminants are discovered, they are placed in a debris box for subsequent disposal at the landfill and if hazardous waste is identified, it is removed and placed in the hazardous waste storage bin located adjacent to the C&D Recycling Area (refer to CST-2 on Figure 1.0-6). Contaminants are currently defined by the zoning as “anything other than wood waste or green waste.”

Materials On-Site

The Recyclery stores several chemicals on-site. There is a 1,000 gallon, double walled steel tank of waste oil located in the Recyclery building, a 1,000 gallon, double walled steel diesel fuel tank located in the southwest corner of the Recyclery property, 25 to 40 – 35 gallon drums of wood chip dying pigment located in the northwest corner of the Recyclery property, and as discussed above, a hazardous waste storage bin located adjacent to the C&D Recycling Area (refer to CST-2 on Figure 1.0-6).

3.9.1.3 *Emergency Response/Contingency Plan*

The landfill and Recyclery have emergency response/contingency plans that must be implemented immediately whenever there is a fire, explosion, or release of hazardous waste constituents which could threaten health and/or the environment. The plans include training of personnel to handle chemicals, shutdown operations, and use emergency response equipment. Copies of these plans are included in the JTD for the landfill and the Report of the Station Information for the Recyclery, which are on file with the City of San José, Department of Planning, Building, and Code Enforcement and can be reviewed during normal business hours.

3.9.2 Hazards and Hazardous Materials Impacts

3.9.2.1 *Thresholds of Significance*

For the purposes of this project, a hazardous materials impact is considered significant if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

⁸⁶ King, Rick. Allied Waste, General Manager for Newby Island. Memo RE: EIR Questions. 19 June 2008.

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.9.2.2 *Discussion of Impacts*

NISL

As part of the project, the capacity of the landfill would increase by approximately 15.12 million cubic yards, the diesel fueling station may be moved to the D-shaped area, the 500-gallon gas tank will be moved if the maintenance building is moved, the leachate holding tanks and ancillary facilities may be relocated to the D-shaped area, an existing pipeline from the landfill to the WPCP may be used to convey leachate directly from the landfill to the WPCP, and the GRS facility would be relocated to the east onto the D-shaped area. However, the types of wastes accepted at the landfill would not change. The proposed project would allow for the continued processing of general waste, sludges, non-hazardous waste, and universal wastes at the landfill as described above and allowed by current permits.

In the event leachate is to be transported via the existing pipeline from the landfill to the WPCP, a PD Permit will be required and the project applicant shall complete an analysis to evaluate the pipe's stability and complete any necessary improvements. The analysis must provide definitive proof of the pipe's stability to the satisfaction of the Director of Environmental Services. Any disturbance to the pipe right-of-way would require additional CEQA review.

The Recyclery

The project proposes, as markets, market demands, recycling programs, and recycling technologies change over time, that the Recyclery be allowed to evolve and process new materials. Under the proposed project, some of the recyclable materials that are currently processed at the Recyclery would continue to be processed or managed on the landfill, including wood waste and green waste. The proposed rezoning would also allow the processing of food waste on the paved area west of the Recyclery, which would be incorporated into the composting operation elsewhere on the site. Some of the recyclable materials separated out of mixed waste loads delivered to the landfill would also continue to be transferred to and processed at the Recyclery, consistent with current operations. In the event the Recyclery would process new materials and use new technologies, subsequent PD Permits and environmental review would be required to ensure no new or more substantial impacts than identified in this EIR would occur.

Operational Impacts

In general, the proposed project would not allow any new hazardous wastes (other than those already permitted) to be processed at the project site. The project would allow for the use of a HHW facility on the project site. The most common household hazardous waste products that would likely be accepted at this facility include automotive fluids, automotive and household batteries, latex and oil paint, oil filters, lawn and garden chemicals, household cleaners, pool chemicals, and pharmaceuticals. The HHW facility would not accept items that constitute an imminent danger, such as explosives, radioactive waste, and most pressurized gas cylinders. The products collected at the HHW facility would ultimately be reused, recycled, or disposed of appropriately. The HHW facility would also likely accept Universal Wastes, such as household batteries, fluorescent bulbs or tubes, and thermostats and other items that contain mercury. When specific details regarding the HHW facility (*e.g.*, size, location, and operations) are known, a PD Permit and subsequent environmental review will be required to ensure that the facility would not result in new or more substantial impacts than identified in this EIR. With the proper storage, containment, and spill prevention measures in place, it is not anticipated that the operation of a HHW facility on the site would result in a significant hazardous materials impact.⁸⁷

Existing operations (*i.e.*, fueling facilities, leachate management facilities, and the GRS facility) may be relocated as part of the project. None of the hazardous materials that might be encountered or utilized on the project site are unusual for industrial land uses, and none of them are likely to result in significant adverse on-site or off-site impacts if used, stored, and disposed in conformance with local, state, and federal laws and regulations. For these reasons, the proposed project would not result in significant new hazardous materials impacts.

Impact HAZ – 1: The project would not result in significant new hazardous materials impacts.
(Less Than Significant Impact)

Groundwater, Surface Water, and Soil Quality Impacts

As discussed previously, the project site has been used for landfilling for over 70 years and the specific make-up of all of the buried waste is unknown. In particular, in the EIR prepared for the General Plan amendment and rezoning of the D-shaped area, the project proposed at that time included excavation of all of the old garbage and other undocumented fill from that area prior to construction because the specific makeup of the buried waste is unknown and there may be hazardous materials present.

However, there has not been any groundwater contamination detected by recent monitoring. As discussed above, there were no contaminants in surface water samples that exceeded MCLs.

As for soil quality, as material is excavated (if necessary) for construction and/or relocation of on-site operations, it would be tested to determine its composition. If hazardous materials are found which are unsuitable for burial in a Class III landfill, they would be buried in the lined Subtitle D cell at NISL or, if necessary, they would be manifested and shipped to a Class I landfill.

⁸⁷ A similar household hazardous waste facility to the one that would be allowed by the proposed project was approved by the City and was found to have less than significant hazardous materials impacts (with mitigation requiring spill prevention measures and appropriate storage). City of San José. EIR for the San José Household Hazardous Waste Collection Facility. April 2007. File No. PP06-100.

Based on these assumptions and procedures, the proposed project would not result in new groundwater or soil quality impacts.

Impact HAZ – 2: The proposed project would not result in new groundwater and soil quality impacts. **(Less Than Significant Impact)**

Long-Term Impacts

As described in the approved Post-Closure Maintenance Plan for the project site, the landfill will be maintained in accordance with applicable regulatory standards contained in 27 CCR, Chapters 3 and 4 and 40 CFR Section 258.61. Post-closure maintenance activities for NISL include the following:

- Landfill gas migration system monitoring and maintenance;
- Groundwater system monitoring and maintenance;
- Stormwater monitoring;
- Final cover inspection and maintenance;
- Settlement monitoring and maintenance;
- Access road maintenance;
- Drainage control system inspection and maintenance; and
- Site security inspection and maintenance.

These activities are described more in the Post-Closure Maintenance Plan, which is on file at the City of San José Department of Planning, Building, and Code Enforcement, CIWMB, and RWQCB.

The project site, in conformance with the approved Post-Closure Maintenance Plan and existing local, state, and federal regulations would not result in significant impacts post-closure.

Impact HAZ – 3: The project site, in conformance with the approved Post-Closure Maintenance Plan and existing local, state, and federal regulations would not result in significant hazards and hazardous materials impacts post-closure. **(Less Than Significant Impact)**

Other Impacts

As discussed previously, the project site is not located within a quarter mile of an existing or proposed school, within an airport land use plan area, or a wildland fire threat zone. The project would not, therefore, emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school, nor would it conflict with an existing airport land use plan, or expose people or structures to impacts from wildland fires. Also, as discussed in **Section 3.1 Land Use**, ~~it is not anticipated that the proposed height expansion of the landfill would cause safety hazards to aircraft or substantially interfere with aircraft operations.~~ the proposed landfill height increase has been reviewed by the FAA and determined not to be a hazard to aircraft operations.

Impact HAZ – 4: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school, conflict with an existing airport land use plan, cause safety hazards to aircraft or substantially interfere with aircraft

operations, or expose people or structures to impacts from wildland fires.
(Less Than Significant Impact)

3.9.3 Mitigation and Avoidance Measures

AM HAZ – 1.1: In the event leachate is to be transported via the existing pipeline from the landfill to the WPCP, a PD Permit will be required and the project applicant shall complete an analysis to evaluate the pipe's stability and complete any necessary improvements. The analysis must provide definitive proof of the pipe's stability to the satisfaction of the Director of Environmental Services. Any disturbance to the pipe right-of-way would require additional CEQA review.

3.9.4 Conclusion

Impact HAZ – 1: The project, with the implementation of the above avoidance measure, would not result in significant new hazardous materials impacts. **(Less Than Significant Impact)**

Impact HAZ – 2: The proposed project would not result in new groundwater and soil quality impacts. **(Less Than Significant Impact)**

Impact HAZ – 3: The project site, in conformance with the approved Post-Closure Maintenance Plan and existing local, state, and federal regulations would not result in significant hazards and hazardous materials impacts post-closure. **(Less Than Significant Impact)**

Impact HAZ – 4: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school, conflict with an existing airport land use plan, or expose people or structures to impacts from wildland fires. **(Less Than Significant Impact)**

3.10 CULTURAL RESOURCES

3.10.1 Setting

According to the City's Archaeological Sensitivity Maps, the eastern portion of the site, including the east portion of the landfill, the D-shaped area, and the Recyclery are designated as archaeologically sensitive areas.⁸⁸ Based on an archaeological review completed by *Basin Research Associates* in March 2001 of the project site, there are no records or reported archaeological sites identified in or adjacent to the project site. There are no known Native American ethnographic settlements, traditional Native American use areas, Hispanic Era resources, or American period resources identified in or adjacent to the project site. In addition, no state and/or federal historically or architecturally significant structures, landmarks, or points of interest are located in or adjacent to the project site.

3.10.2 Cultural Resources Impacts

3.10.2.1 *Thresholds of Significance*

For the purposes of this project, a cultural resources impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resources as defined in Section 15064.5 of the CEQA Guidelines;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

3.10.2.2 *Discussion of Impacts*

The project proposes to increase the maximum permitted height of the landfill, possibly relocate existing uses elsewhere on-site, and incremental changes in operations (refer to **Section 1.0 Description of the Proposed Project** for more detail).

The archaeological review found that there were no known historic or prehistoric resources in or adjacent to the project site. In addition, the project site's historic use as a burn dump and landfill further limits any possibility of cultural resources being present on the site. For these reasons, the approval of the project is not anticipated to result in significant impacts to cultural resources.

Consistent with City policy, the project will include the following assurances:

- Should evidence of prehistoric or historic era cultural resources⁸⁹ be discovered during pre-construction (including soil remediation) or construction work, work within 50 feet of the

⁸⁸ City of San José and Basin Research Associates, Inc. Archaeological Sensitivity Map, Milpitas Quadrangle. March 1993.

⁸⁹ Significant prehistoric cultural materials may include: human bone – either isolated or intact burials; habitation (occupation or ceremonial structures as interpreted from rock rings/features, distinct ground depressions, differences in compaction); artifacts including chipping stone objects such as projectile points and bifaces, groundstone artifacts

find shall be stopped to allow adequate time for evaluation and mitigation by a qualified professional archaeologist. The material shall be evaluated and if significant, a mitigation program including collection and analysis of the materials at a recognized storage facility shall be developed and implemented under the direction of the City's Environmental Principal Planner.

- Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American.

If the Coroner determines that the remains are not subject to his/her authority, the Native American Heritage Commission shall be notified to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

Impact CUL – 1: The proposed project, with the implementation of the above standard practices, would not result in significant impacts to cultural resources. (**Less Than Significant Impact**)

3.10.3 Mitigation and Avoidance Measures

No mitigation or avoidance measures are required.

3.10.4 Conclusion

Impact CUL – 1: The proposed project, with the implementation of the above standard measures, would not result in significant impacts to cultural resources. (**Less Than Significant Impact**)

such as manos, metates, mortars, pestles, grinding stones, pitted hammerstones, and shell and bone artifacts including ornaments and beads; various features and samples including hearths (fire-cracked rock, baked and vitrified clay), artifact caches, faunal and shellfish remains (which permit dietary reconstruction), distinctive changes in soil stratigraphy indicative of prehistoric activities; and isolated artifacts.

Significant historic cultural materials may include finds from the late 19th through early 20th centuries. Objects and features associated with the Historic Period can include: structural remains or portions of foundations (bricks, cobbles/boulders, stacked field stone, postholes, etc.); trash pits, privies, wells, and associated artifacts; isolated artifacts or isolated clusters of manufactured artifacts (e.g., glass bottles, metal cans, manufactured wood items, etc); and human remains. In addition, cultural materials including both artifacts and structures that can be attributed to Hispanic, Asian, and other ethnic or racial groups are potentially significant. Such features or clusters of artifacts and samples include remains of structures, trash pits, and privies.

3.11 UTILITIES AND SERVICE SYSTEMS

3.11.1 Setting

3.11.1.1 *Water Service*

The project site is served by a well on the Recyclery property (see Figure 1.0-6). At the NISL, the well water is mainly used for dust control, with minor amounts used for nonpotable uses. The landscaping on the project site is watered by a 10-inch recycled water line in McCarthy Boulevard. Bottled water is utilized for all drinking purposes at NISL. Bottled water is available at the employee trailer, maintenance building, scale houses, the Recyclery, and IDC offices.

There is an existing 14-inch potable water line in McCarthy Boulevard, with a six-inch extension at Dixon Landing Road. There is also a 10-inch recycled water line in McCarthy Boulevard, with a smaller extension onto NISL.

3.11.1.2 *Wastewater Treatment/Sanitary Sewer*

Sewage from the project site is collected in holding tanks that are pumped routinely. The sewage is transferred from the holding tanks to tanker trucks that transport the sewage to the WPCP for treatment and disposal. No septic system or municipal sewer connection exists on the project site. There is an existing four-inch sanitary sewer line that stubs out at the entrance to NISL.

3.11.1.3 *Storm Drainage Systems*

NISL

Stormwater runoff and subdrain water within the active portion of the landfill is diverted and channeled within a series of drainage swales, ditches, and berms, which then empty into the main stormwater retention pond in the southern portion of the landfill. Unpaved roads are graded to assist in water sheeting and flow. Collected stormwater is discharged to South Coyote Slough. Runoff from the compost windrow areas is conveyed via drainage swales and ditches to adjacent compost stormwater retention ponds. Water in these ponds is used to water the compost windrows or for dust control on the compost windrow pads and internal roads in the composting area. The runoff from the northern portion of the landfill flows directly to Coyote Creek. The stormwater runoff that comes into contact with waste is collected separately and disposed with the leachate.

The stormwater management system at NISL is capable of handling the runoff resulting from a 24-hour, 100-year storm. Additional detail regarding NISL's stormwater management system is provided in **Section 3.8 Hydrology and Water Quality**.

The Recyclery

Stormwater runoff from the Recyclery is contained and directed to an underground sump located along the southern boundary of the Recyclery. The runoff is then pumped to the main retention pond. The water in the pond is allowed to settle, then pumped into South Coyote Slough untreated, which flows to the San Francisco Bay (refer to **Section 3.8** for discussion of water quality).

The runoff from the food waste area is conveyed to the compost runoff retention pond located at the north end of the site where it is used to water the compost windrows (see compost runoff retention pond on Figure 1.0-6).

3.11.1.4 *Electricity and Natural Gas Services*

NISL

Gas produced by the refuse on-site is collected by the Gas Recovery System, Inc. (GRS) to generate electricity which is exported (see Landfill Gas Export Plant on Figure 1.0-6), or be destroyed by the landfill's gas flares (see Landfill Gas Flares on Figure 1.0-6). There are 164 vertical landfill gas collection wells, 22 vertical gas-leachate pumping extraction wells, and eight horizontal gas trench collectors collecting landfill gas (LFG) from the existing refuse.

There are two electrical generation plants, referred to as Newby 1 and Newby 2, and a gas export plant, referred to as Newby 3, on the landfill (see Figure 1.0-6). Newby 1 and 2 have a total net generation capacity of approximately 4,900 kilowatts (kW) per day. Electricity generated is sold to PG&E. Newby 3 treats and compresses landfill gas for pipeline export to the WPCP. The plant also operates an electricity generation facility fueled by a blend of waste gases including some of the gas exported from the landfill. Electricity to the landfill is provided by PG&E.

The Recyclery

There are above ground power lines located at the Recyclery. Electricity to the Recyclery is provided by PG&E.

3.11.1.5 *Telephone*

Telephone service is provided by AT&T at the landfill scale house, maintenance building, IDC office, and the Recyclery. Additionally, cellular phones and two-way radios are carried on-site by supervisors for business and emergency purposes.

3.11.2 Utilities and Service Impacts

3.11.2.1 *Thresholds of Significance*

For the purposes of this project, a utility and service impact is considered significant if the project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Generate waste before or after project completion in a quantity sufficient to negatively affect the City's compliance with state law or General Plan Solid Waste Goal 3.2B; or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

3.11.2.2 *Discussion of Impacts*

Water Service

No changes or improvements to water service at the site are currently proposed as part of this project. The project site would continue to be served by the well on the Recyclery property and recycled water would continue to be used for landscaping irrigation. In addition, bottled water would continue to be available at the employee trailer, maintenance building, scale houses, the Recyclery, and IDC offices. Should permanent buildings be constructed on the D-shaped area, the site would require connections to existing, adjacent water lines. It is not anticipated that the incremental increase in water service for the D-shaped area would result in the need to expand existing water facilities or construct new water facilities. In addition, it is anticipated that there are sufficient water supplies to serve the D-shaped area if it were to connect to the existing water system.

Impact UTIL – 1: The proposed project would not require or result in the need to expand existing water facilities or construct new water facilities. In addition, sufficient water supplies are available to serve the D-shaped area (if required).
(Less Than Significant Impact)

Wastewater Treatment/Sanitary Sewer

No improvements or changes to the existing sewage collection operation are currently proposed as part of this project. Sewage from the project site would continue to be collected in holding tanks, which are transferred to tanker trucks that transport the sewage to the WPCP for treatment and disposal. Should permanent buildings be developed on the D-shaped area, the site would require connections to existing, adjacent sewer lines. It is not anticipated that the incremental increase in sewer service from the D-shaped area would result in the need to expand existing sewer facilities or construct new sewer facilities.

In addition, the project would not likely result in substantial increases in leachate generation. Leachate generation for landfills like NISL is generally more a function of square area than it is of waste mass. Since the proposed expansion does not include an increase in the area of the landfill, the increase in leachate generation would be negligible. Therefore, it is anticipated that the WPCP would have sufficient capacity to serve the project.

Impact UTIL – 2: The proposed project would not require or result in the need to expand existing sewer facilities or construct new sewer facilities. **(Less Than Significant Impact)**

Storm Drainage System

Should permanent buildings be developed on the D-shaped area, that area would be paved, and would be subject to water quality requirements of the City and countywide nonpoint source programs including provision of Best Management Practices (BMPs) for water quality.

NISL

Runoff from the project site will continue to be collected and diverted as it is under existing conditions, except that runoff conveyed to the existing main stormwater retention pond would eventually be diverted to two new ponds located both east and west of the existing pond (see sedimentation basins on Figure 1.0-10). The stormwater collected would still be pumped to South Coyote Slough. New stormwater lines will be laid to transport stormwater to the ponds. The new stormwater management system (two new ponds and stormwater lines) would be designed to the same performance level as the existing stormwater management system and be able to handle a 24-hour, 100-year storm. Therefore, the project would not result in the increase of runoff from the site.

The location of the proposed ponds and stormwater lines are in existing, disturbed areas of the landfill and will be in fill. No significant impacts to biological or cultural resources are anticipated (refer to **Sections 3.6 Biological Resources** and **3.10 Cultural Resources**). Therefore, construction of the ponds and installation of the stormwater lines are not anticipated to result in significant environmental impacts.

The Recyclery

No changes to the storm drain system for the Recyclery is proposed as part of this project. Stormwater runoff from the Recyclery would continue to be contained and directed to an underground sump located along the southern boundary of the Recyclery. The runoff would then be pumped to the proposed sedimentation basin located in the southern portion of the site, then pumped into South Coyote Slough.

Impact UTIL – 3: The construction of the two proposed stormwater detention ponds and storm drain lines to convey site runoff to these proposed ponds would not result in significant environmental impacts. (**Less Than Significant Impact**)

Electricity and Natural Gas

NISL

The GRS facility is currently located within the designated landfill development area and accordingly will need to be relocated when the area is developed for waste disposal. Therefore, as part of the project, the GRS plant may be expanded and will most likely be relocated to the east, onto the D-shaped area. Note that the GRS plant would not remain indefinitely on the site. It would likely be removed when gas is no longer used for power generation after the landfill is closed.

Currently, the gas produced on-site is used to generate electricity to sell to PG&E. The gas generated on-site is also exported to the WPCP and destroyed by the landfill's gas flares. As part of the project, the landfill operator would like to be able to utilize some of the electricity generated by the two electrical generation plants (Newby 1 and 2) for on-site uses and continue to sell, export, and destroy

the rest of the landfill gas. In addition, as landfill gas production increases, the project would allow additions to the GRS plants' capacity or new capacity to be brought online. Future expansion of the GRS facility or the construction of new buildings will require a PD Permit and additional CEQA review. If new buildings are developed on the D-shaped area, they would be connected to an electrical source. If the expansion would result in any new conflicts or significant impacts, the subsequent CEQA document will address the impacts.

The continual management of the gas generated by the landfill is not anticipated to result in significant environmental impacts.

The Recyclery

Electricity to the Recyclery would continue to be provided by PG&E under the proposed project. No changes to electricity use at the Recyclery are proposed as part of the project.

Impact UTIL – 4: The proposed project would not result in significant impacts related to electricity and natural gas. **(Less Than Significant Impact)**

3.11.3 Mitigation and Avoidance Measures

No mitigation or avoidance measures are required or proposed.

3.11.4 Conclusion

Impact UTIL – 1: The proposed project would not require or result in the need to expand existing water facilities or construct new water facilities. In addition, sufficient water supplies are available to serve the D-shaped area (if required). **(Less Than Significant Impact)**

Impact UTIL – 2: The proposed project would not require or result in the need to expand existing sewer facilities or construct new sewer facilities. **(Less Than Significant Impact)**

Impact UTIL – 3: The construction of the two proposed stormwater detention ponds and storm drain lines to convey the runoff to these proposed ponds would not result in significant environmental impacts. **(Less Than Significant Impact)**

Impact UTIL – 4: The proposed project would not result in significant impacts related to electricity and natural gas. **(Less Than Significant Impact)**

3.12 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126(c) and Appendix G (Energy Conservation of the Guidelines), which require that EIRs include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The information in this section is based largely on data and reports produced by the California Energy Commission and the Energy Information Administration of the US Department of Energy.

3.12.1 Introduction

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (*e.g.*, oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases.

Energy usage is typically quantified using the British Thermal Unit (Btu).⁹⁰ As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 123,000 Btu, 1,000 Btu, and 3,400 Btu, respectively.

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (*e.g.*, the EnergyStarTM program) and transportation (*e.g.*, fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets forth energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the *Flex Your Power* program promotes conservation in multiple areas.

At the local level, the City's General Plan Sustainable City Strategy and green building policies have objectives goals regarding energy efficiency and the use of renewable energy technologies. In addition, the City's Green Vision promotes energy conservation.

3.12.1.1 *General Plan*

Sustainable City Strategy

The Sustainable City Strategy is a statement of the City's commitment to becoming an environmentally and economically sustainable city. Programs promoted under this strategy include recycling, waste disposal, water conservation, transportation demand management, and energy efficiency. The Sustainable City Strategy is intended to support these efforts by ensuring that development is designed and built in a manner consistent with the efficient use of resources and environmental protection.

⁹⁰ The British Thermal Unit (BTU) is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit.

Green Building Policy

The City's Green Building Policy fosters long-term social, economical, and environmental sustainability in public building and development while making green building the standard practice in San José and celebrating sustainability as a core value to the community. The vision for Green Building in San José is a place where the people have knowledge and opportunities to build and occupy dwellings that have a maximum impact on the well being of the occupants and minimal impact on the environment. The Green Building Policy goals center on five main categories: sustainable sites, energy and atmosphere, water efficiency, materials and resources, and indoor environmental quality.

Private Sector Green Building Policy (6-32)

In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards. The proposed project would be subject to this policy.

Energy Goal

The City's Energy Goal is to foster development, which, by its location and design, reduced the use of non-renewable energy resources in transportation, buildings and urban services (utilities), and expands the use of renewable energy resources.

3.12.1.2 San José Green Vision

In October 2007, the City Council adopted the *San José Green Vision*. The *Green Vision* is a 15-year plan to transform San José into a world center of Clean Technology, promote cutting-edge sustainable practices, and demonstrate that the goals of economic growth, environmental stewardship and fiscal responsibility are inextricably linked. The 10 goals of the *Green Vision* are as follows:

1. Create 25,000 Clean Tech jobs as the World Center of Clean Tech Innovation;
2. Reduce per capita energy use by 50 percent;
3. Receive 100 percent of our electrical power from clean renewable sources;
4. Build or retrofit 50 million square feet of green buildings;
5. Divert 100 percent of the waste from our landfill and convert waste to energy;
6. Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day);
7. Adopt a General Plan with measurable standards for sustainable development;
8. Ensure that 100 percent of public fleet vehicles run on alternative fuels;
9. Plant 100,000 new trees and replace 100 percent of our streetlights with smart, zero-emission lighting; and
10. Create 100 miles of interconnected trails.

Achieving the above goals would reduce the City's energy use and promote renewable energy sources, promote alternative fuels, and encourage automobile-alternative modes of transportation.

As discussed in **Sections 3.3** and **4.2**, the San Francisco Bay Trail project includes a planned trail loop along the perimeter levee of the landfill. When completed, the trail loop around the landfill

would add mileage beyond what is currently envisioned in the City’s Green Vision goal of 100 miles of interconnected trails. The City will consider its jurisdiction and existing planning documents before committing to a role in future San Francisco Bay Trail development at this location.

3.12.2 Setting

Total energy usage in California was 8,360 trillion Btu in the year 2005 (the most recent year for which this specific data was found).⁹¹ Of California’s total energy usage in 2005, the consumption breakdown by sector was approximately 18 percent (1,469 trillion Btu) for residential uses, 18 percent (1,484 trillion Btu) for commercial uses, and 24 percent (1,903 trillion Btu) for industrial uses, and 43 percent (3,275 trillion Btu) for transportation.⁹² This energy is primarily supplied in the form of coal, natural gas, petroleum, nuclear electric power, and hydroelectric power.

Given the nature of the proposed project (*i.e.*, vertical expansion of a landfill), the remainder of this discussion will focus on the two most relevant sources of energy: electricity and gasoline used for the operation of the garbage trucks.

3.12.2.1 *Electricity*

Electricity supply in California involves a complex grid of power plants and transmission lines located in the Western United States, Canada, and Mexico. The issue is complicated by market forces that have become prominent since 1998, which is when a new regulatory environment commonly referred to as “deregulation” took effect in California. Supply is further complicated by the fact that the peak demand for electricity is significantly higher than the off-peak demand. For example, in August 2004, peak electric demand – due in large part to hot weather – reached a record high of 44,497 megawatts, which is almost double the lowest demand period. Recent record peak electricity usage was documented at approximately 58,900 megawatts.⁹³

Electricity Sources

Approximately 70 percent of electricity used in California is generated within the state, with the balance imported from states in the southwest (22 percent) and the Pacific Northwest (eight percent). The electricity is produced from power plants fueled by natural gas (45 percent), coal (16 percent), hydro (12 percent), nuclear (15 percent), and renewables (12 percent).⁹⁴ Today, none of California’s electricity comes from petroleum. The state of California adopted a Renewables Portfolio Standard with a mandate of generating, by 2010, 20 percent of its power from renewable sources such as biomass, geothermal, small hydro, solar, and wind. By 2020, that state is to have 33 percent of the state’s electricity come from renewable resources.⁹⁵

A renewable source for producing electricity is landfill gas. Currently, the landfill gas generated at NISL is collected and used to generate electricity at the GRS facility. The GRS facility currently

⁹¹ United States Energy Information Administration. Annual Energy Review. N.d. Available at: <http://www.eia.doe.gov/emeu/aer/overview.html>.

⁹² Aldrich, Bob. State of California Energy Commission. Personal Communication. 28 March 2007. Data available at: http://www.eia.doe.gov/emeu/states/sep_sum/html/pdf/rank_use.pdf.

⁹³ California Energy Commission, Energy Almanac. Historic Statewide California Electricity Demand. 29 August 2008. Available at: http://www.energyalmanac.ca.gov/electricity/historic_peak_demand.html.

⁹⁴ California Energy Commission, Energy Almanac. California’s Major Sources of Energy. 1 July 2008. Available at: http://energy/almanac.ca.gov/overview/energy_sources.html.

⁹⁵ California Energy Commission 2007. 2007 Integrated Energy Policy Report (CEC-100-2007-008CMF). Page 23.

consists of three plants: Newby 1, 2, and 3. Newby 1 and 2 are electrical generation plants. Landfill gas collected produces an average of 4,200 kilowatts (kW) per day of electricity using a flow of approximately 2,200 cubic feet of landfill gas per minute. The electricity generated is sold to PG&E. In recent years, the landfill has sold approximately 4,200 kW of electricity to Pacific Gas and Electric (PG&E).

In addition to PG&E, Southern California Edison (SCE), San Diego Gas & Electric (SDG&E), Los Angeles Department of Water and Power (LADWP), and Sacramento Municipal Utility District (SMUD) provide about 80 percent of all electricity consumed in California. The remaining 20 percent is provided by smaller utility companies.⁹⁶

Electricity Consumption

Electricity consumption in California increased by approximately 12 percent from approximately 245,000 gigawatt hours (GWh) in 1997 to approximately 285,000 GWh in 2007.⁹⁷ Electricity consumption in California is dominated by the commercial and residential sectors: approximately 37 percent of electricity is by the commercial sector, 32 percent by the residential sector, 16 percent by the industrial sector, and the remaining 15 percent by agriculture, transportation, communication, utilities, mining, and street lighting.⁹⁸ Electricity consumption is forecasted to increase by approximately 12 percent from approximately 285,000 GWh in 2007 to approximately 320,000 GWh in 2017.⁹⁹

Electricity used at NISL is for lighting, heating and cooling, and operation of machinery and equipment. Landfill operations use approximately 1,741 megawatts (MW) of electricity a year.

Electricity is provided to the Recyclery by PG&E. Electricity used at the Recyclery is for lighting, heating and cooling, and operation of machinery and equipment. The Recyclery uses approximately 342 MW of electricity a year.

The California Energy Commission reviewed electricity supply and demand information from publicly owned utilities throughout the state and has concluded that, in total, the utilities have sufficient resources to meet the anticipated electricity demand for the next several years.¹⁰⁰

3.12.2.3 Fuel for Motor Vehicles

Fuel Sources

Transportation fuels, including gasoline and diesel fuels, are produced by refining crude oil. California is the third highest producer of transportation fuels in the nation, with a crude oil distillation capacity of more than 1.9 million barrels per day.¹⁰¹ Approximately 39 percent of crude oil used in California is produced in-state, the remaining 61 percent comes from Alaska (16 percent) and foreign sources (45 percent). Foreign imports are primarily from Saudi Arabia, Ecuador, Iraq,

⁹⁶ Ibid., 24.

⁹⁷ Ibid., Figure 2-2, page 37.

⁹⁸ Ibid., Figure 1-9, page 25.

⁹⁹ Ibid., Figure 2-2, page 37.

¹⁰⁰ Ibid., 41.

¹⁰¹ Ibid., 27.

and Mexico.¹⁰² Until the mid-1990s, California refineries kept pace with the demand for gasoline and diesel fuel, but since then, refiners have had to import more finished products. California imports approximately 10 percent of its refined blending components and finished gasoline and diesel to meet growing demands. All imported crude supplies and products arrive in California by ship through marine terminals.¹⁰³

Currently, California's petroleum infrastructure operates at near capacity, and the volume of imports is constrained by storage capacity and capabilities.¹⁰⁴ It is estimated that the demand for gasoline and diesel will increase by one to two percent each year as the population registers more vehicles and drives more miles.¹⁰⁵

Fuel Consumption

More than 40 percent of all energy used in California is for the transportation of people and goods. California is the third largest consumer of gasoline in the world, behind the entire United States and China.¹⁰⁶ In recent years, Californians consume approximately 16 billion gallons of gasoline and four billion gallons of diesel annually.¹⁰⁷ This represents an approximately 50 percent increase over the amount that was used 20 years ago. The primary factors contributing to this increase are: 1) population growth and more on-road vehicles, 2) low per-mile cost of gasoline for the past two decades, 3) lack of alternatives to conventional gasoline and diesel fuels, 4) consumer preference for larger, less fuel-efficient vehicles, and 5) land use patterns that have increased the distance between jobs and housing.¹⁰⁸ It is estimated that Californians will consume more than 24 billion gallons of gasoline and diesel fuel by the year 2020.¹⁰⁹

It is estimated that NISL uses 167,000 gallons of diesel a year to operate the garbage trucks and the Recyclery uses approximately 222,000 gallons of diesel a year to operate the recycling trucks.

According to the California Energy Commission, to meet near-term transportation fuel demands, the state must expand its marine terminal capacity, marine storage, the pipelines connecting these facilities with the refineries, and other distribution pipelines to meet rising fuel demand.¹¹⁰ To meet transportation fuel demands over the next several decades, the state must increase fuel efficiency, expand non-traditional fuel use, and realign consumer preferences to reduce demand for all transportation fuels.

¹⁰² California Energy Commission, Energy Almanac. California's Major Sources of Energy. 1 July 2008. Available at: http://www.energyalmanac.ca.gov/overview/energy_sources.html.

¹⁰³ California Energy Commission 2007. 2007 Integrated Energy Policy Report (CEC-100-2007-008CMF). Page 27.

¹⁰⁴ Ibid., 190.

¹⁰⁵ Ibid., 29.

¹⁰⁶ Ibid., 189.

¹⁰⁷ Ibid., 187.

¹⁰⁸ California Energy Commission. 2005 Integrated Energy Policy Report. November 2005. Page 7.

¹⁰⁹ California Energy Commission 2007. 2007 Integrated Energy Policy Report (CEC-100-2007-008CMF). Page 10.

¹¹⁰ Ibid., 195.

3.12.3 Energy Impacts

3.12.3.1 *Thresholds of Significance*

For the purposes of this project, an energy impact would be considered significant if the project would:

- Use fuel or energy in a wasteful manner; or
- Result in a substantial increase in demand upon energy resources in relation to projected supplies.

3.12.3.2 *Discussion of Impacts*

In general, the primary change the project is proposing is the increase in landfill height and capacity. The project does not propose to increase the hours of operation or increase the daily permitted tons of waste allowed to be disposed at the landfill. Also, as discussed in **Section 3.3 Transportation**, the project would not generate more traffic above existing daily conditions. However, the proposed project allows a greater amount of waste to be disposed of at the site for a longer period of time, specifically 15.12 million additional cubic yards could be landfilled at NISL that could not otherwise be allowed there. Without the proposed project, that increment of waste will instead need to be disposed at another landfill.

Without the project, if the landfill were to reach capacity before fulfilling its contractual agreements, that contractual waste would likely be transported to Forward Landfill in Manteca approximately 147 miles from NISL. Non-contractual waste typically delivered to NISL would be transported to other landfills. Other operating landfills in San José are Kirby Canyon Landfill (which is estimated to close in 2038) and Guadalupe Sanitary Landfill (which is estimated to reach capacity in 2025). Other operating landfills in Santa Clara County are the NORCAL Waste Systems Pacheco Pass landfill located in San Felipe (Lake) and City of Palo Alto Refuse Disposal Site located in Palo Alto. However, these two landfills are estimated to close in the near future (*e.g.*, in or before 2011).¹¹¹ Therefore, if the project is not approved, non-contractual waste would likely be transported to Kirby Canyon Landfill, Guadalupe Sanitary Landfill, or other landfills outside of the County. Alternative out of County landfills include Altamont Landfill and Resource Recovery in Livermore, Vasco Road Sanitary Landfill in Livermore, John Smith Road Landfill in Hollister, and Monterey Peninsula Landfill and Recycling Facility in Marina.

According to the landfill operator, non-contractual waste delivered to NISL typically comes from local areas including the cities of San José, Santa Clara, and Milpitas. To provide information about the difference in travel time and distance to alternative landfills to NISL, a mid-point between the cities of San José, Santa Clara, and Milpitas was chosen. For the purposes of this analysis the mid-point is assumed to be at the intersection of Keyes Street/Story Road and South 10th Street in San José.¹¹² The travel time and distance from this mid-point to NISL and alternative landfill sites are summarized in Table 3.12-1 below.

¹¹¹ California Integrated Waste Management Board. California Waste Stream Profiles: Facilities. Available at: <http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/Default.asp>.

¹¹² The mid-point was selected by looking at the area that encompasses the cities of San José, Santa Clara, and Milpitas and roughly approximately the center of that area.

As shown in Table 3.12-1, transporting non-contractual waste from the mid-point to NISL would be the most efficient in terms of travel time. However, Guadalupe Sanitary Landfill is more proximate to the mid-point than NISL or any of the other landfill alternatives to the mid-point.

Table 3.12-1: Estimated Travel Time and Distance from Mid-point to NISL and Alternative Landfills		
Name of Destination Landfill	Estimated Travel Time (minutes)	Estimated Travel Distance (miles)
Newby Island Sanitary Landfill	15	12
Guadalupe Sanitary Landfill	24	10
Kirby Canyon Landfill	24	22
Altamont Landfill and Resource Recovery	53	49
Vasco Road Sanitary Landfill	46	45
John Smith Road Landfill	68	53
Monterey Peninsula Landfill and Recycling Facility	67	61
Note: Travel time and distance were estimated using Google Maps.		

Energy Generation

As discussed previously, the landfill gas generated on-site is used to generate electricity, exported to WPCP, or combusted by the existing landfill flares. Landfill gas is a renewable resource for electricity generation. Electricity generated by the GRS facility by Newby 1 and Newby 2 is sold to PG&E. Newby 1 and 2 currently have a net capacity to produce approximately 4,900 kilowatts of electricity per day. However, electricity sales to PG&E are limited to 4,200 kilowatts per day. The GRS gas export plant (Newby 3) on-site treats and compresses landfill gas for export to the WPCP. The demand for landfill gas varies seasonally depending primarily on the needs of the WPCP. The WPCP uses the gas to generate electricity for use in wastewater treatment operations. Newby 3 can process up to 1,500 CFM of landfill gas.

Currently, the GRS facility, which is located within the designated landfill development area, will need to be relocated when the area is developed for waste disposal. Under the proposed project, the GRS facility will most likely be relocated to the east, onto the D-shaped area. Also, it is anticipated more landfill gas will become available in the future (with or without the project) and, as a result, expansion of the GRS facility's capacity or new capacity would need to be brought online (refer to **Section 3.4 Air Quality** for a discussion of the increase in emissions from the future increase in landfill gas production). In addition, under the proposed project, it is anticipated that the landfill operator would use some of the electricity generated by Newby 1 and 2 on-site (as well as for export) and operate the landfill flare more frequently.

Energy Consumption

Energy would be consumed during both the operational and construction phases of the project. The proposed height expansion of the landfill results in increased landfill capacity. With the additional 15.12 million cubic yards of capacity, the landfill can continue to operate at the existing rate for a longer period of time. Without the approval of the proposed project, assuming NISL reduces incoming waste to its existing contractual obligations, incoming waste would be significantly reduced in order to accommodate existing contractual waste (the longest existing contract extends

until 2023). Without the proposed project, assuming NISL continues to operate as it does today, the landfill would reach capacity in the year 2016. Therefore, the operation of the landfill under the proposed project would consume more energy than under existing conditions without the approval of the project by maintaining the current operations for a longer period of time than would have been allowed under existing conditions.

As part of the project, existing operations on-site may be relocated, permanent buildings may be constructed (which will be subject to the City's Private Sector Green Building Policy as applicable) to replace existing office trailers, and implementation of operational or physical changes necessary to comply with existing and new regulations (refer to **Section 1.0 Description of the Project** for more detail). Energy would be consumed in the relocation of existing operations and construction of new buildings. The relocation of existing operations would require energy to move and transport facilities to different areas of the site and construct supporting infrastructure as necessary (*e.g.*, new stormwater lines to convey site runoff to the proposed retention ponds). The construction of new buildings and supporting infrastructure would require energy for the manufacture and transportation of building materials, preparation of the project site (grading), and the actual construction of the buildings and infrastructure.

In addition, without the project, contractual waste, including garbage from nearby cities including San José, Milpitas, and Santa Clara, could need to be transported and disposed of at Forward Landfill in Manteca, approximately 147 miles from NISL. Without the project, non-contractual waste would likely be disposed of at Guadalupe Landfill or Kirby Canyon Landfill, or at landfills located further away in adjacent counties such as Altamont Landfill and Resource Recovery in Livermore, Vasco Road Sanitary Landfill in Livermore, John Smith Road Landfill in Hollister, and Monterey Regional Waste Management in Marina. As shown in Table 3.12-1, the travel time and distance required to transport waste from the selected mid-point to alternative landfills (except for Guadalupe Landfill) would require more energy (*i.e.*, fuel) than transporting the waste to NISL. Transporting waste to Guadalupe Landfill, in comparison to NISL, would have a greater travel time, but shorter distance. For this reason, it is assumed that the energy used to transport waste from the mid-point to Guadalupe Landfill would be similar to transporting the waste to NISL.

Note that most of the non-contracted waste currently delivered to NISL (about 350,000 tons out of a total of 550,000 tons) is diverted and used for landfill cover. The remaining non-contracted waste (about 200,000 ton) is landfilled. If the non-contracted waste that is typically delivered to NISL is delivered to an alternative landfill that does not have the recycling capacity of NISL, all of the non-contracted waste would likely be landfilled rather than mostly diverted.

While the proposed project would extend the useful life of the landfill, in which energy (*e.g.*, electricity and diesel) would be consumed by the operation of the landfill, continuing operation would save fuel associated with transporting local waste to landfills located further away, with the exception of Guadalupe Landfill where fuel consumption is estimated to be similar (see Table 3.12-1). For these reasons, the project would not use energy (including fuel) in a wasteful manner, result in substantial demands on energy resources, or result in longer overall distances between local waste generation sources and waste disposal facilities.

Impact EN – 1: The proposed project would not result in significant energy impacts. (**Less Than Significant Impact**)

3.12.4 Mitigation and Avoidance Measures

No mitigation is identified or required.

3.12.5 Conclusion

Impact EN – 1: The proposed project would not result in significant energy impacts. (**Less Than Significant Impact**)

SECTION 4.0 AVAILABILITY OF PUBLIC SERVICES

Unlike utility services, public services are provided to the community as a whole, usually from a central location or from a defined set of nodes. The resources base for delivery of the service, including the physical service delivery mechanisms, is financed on a community-wide basis, usually from a unified or integrated financial system. The service delivery can be provided by a city, county, service, or other special district. Usually, new development will create an incremental increase in the demand for these services. The amount of the demand will vary widely, depending on both the nature of the development (residential verses industrial, for instance) and the type of services, as well as on the specific characteristics of the development (such as senior housing verses family housing).

The impact of a particular project on public services and facilities is generally a fiscal impact. By increasing the demand for a type of service, a project could cause an eventual increase in the cost of providing the service (more personnel hours to patrol an area, additional fire equipment needed to service a tall building, etc.). These impacts are economic; not environmental.

CEQA does not require an analysis of fiscal impacts unless the increased demand triggers the need for a new facility (such as a school or fire station), since the new facility would have a physical impact on the environment.

4.1 FIRE AND POLICE PROTECTION

Because the project site does not have proximate access to City of San José streets, but is served by public streets in the City of Milpitas, the closest response to a fire or medical emergency is by the City of Milpitas fire protection personnel. The City of San José participates in several automatic aid programs with the cities of Milpitas and Santa Clara, and the Santa Clara County Central Fire Protection District. These automatic aid programs assign the closest responding units, when they are available, within designated areas of San José and the other participating jurisdictions. These agreements provide improved Emergency Medical Services (EMS) and fire protection services to the participating jurisdictions.

The nearest first station in Milpitas is located at the northeast corner of Milpitas Boulevard and Midwick Drive, approximately 1.5 miles and 4.5 minutes travel time from the project site. The nearest fire stations in San José are No. 25 located at 1590 Gold Street and No. 29 located at Innovation Drive. Both San José fire stations are approximately 5.7 miles and eight minute travel time from the project site.

Police protection services are provided by the City of San José Police Department (SJPD). It is the goal of the SJPD to respond to emergencies within three minutes.

The project proposes to increase the maximum permitted height of the landfill from 150 to 245 feet (NGVD29), which will add approximately 15.12 million cubic yards of capacity beyond that already permitted. The project is also proposing other changes to existing operations and improvements on-site (refer to **Section 1.0 Description of the Proposed Project** for more detail). It is not anticipated that the changes to existing operations and uses on-site would result in a substantial increase in need for fire and police protection at the site or require the construction of new fire and police facilities.

Fire suppressing materials are currently and will continue to be available on-site. This equipment includes stockpiled soil near the active face and a water truck. Fire potential at the working face of the landfill is diminished by maintaining a small working face, proper compaction and covering with daily cover. Fire extinguishers are maintained on all site equipment, at the employee trailer, the maintenance building, the hazardous waste storage bin, the outside oil and fuel tanks, and at the scale houses. All disposal processing equipment have fire suppression systems in the event of an equipment fire. Site personnel are trained in methods of handling accidental fires on the active face of the landfill in accordance with the landfill's site emergency response plan.

4.2 OTHER SERVICES

No demand is placed on library, parks, recreation, or school facilities by existing, or proposed, uses on-site.

A system of trails and pathways in the north San José/Milpitas/Fremont area provides recreational opportunities for pedestrians, joggers, hikers, and bicyclists. The city of Fremont has a plan for a bicycle and pedestrian trail on the other side of Coyote Creek from the project site. The creek and its levees are a minimum of 150 to 200 feet wide along this reach. Also, the ABAG has future plans to extend the San Francisco Bay Trail around the project site (see Figure 3.0-1). As discussed previously, the San José Bay Trail Master Plan provides for a trail plan for the San José segment of the San Francisco Bay Trail project. The nearest San José Bay Trail reach to the project site is located south of Dixon Landing Road and McCarthy Boulevard intersection on the west side of Coyote Creek (refer to Figure 3.0-1). Other existing trails in the project site vicinity include the Lower Guadalupe River Trail, Santa Clara County Juan Bautista de Anza National Historic Trail, Coyote Creek Trail, and Calaveras Trail located southwest, southeast, and east of the site. In addition, the SR 237 bikeway (which does not provide access to the site) is located in the vicinity, approximately three miles southeast of the project site. As discussed in **Sections 3.1 Land Use** and **3.3 Transportation**, the proposed project would not conflict with the alignments of existing or planned trails and paths.

The project site is also adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge. The 30,000-acre refuge provides critical habitat to resident species and hosts over 280 species of birds as part of the Pacific Flyway. Under existing conditions, the landfill operations could be impacting special-status species. The proposed project, with the implementation of identified mitigation measures MM BIO – 13.1 and 13.32 in **Section 3.6 Biological Resources**, would prevent landfill operations from significantly impacting habitat or species at the Refuge. The proposed project, therefore, would not result in significant impacts to habitat or species at the Refuge.

This EIR evaluates an amendment to the City of San José's adopted Zoning Ordinance. The CEQA Guidelines require that an EIR identify the likelihood that a proposed project could "foster" or stimulate "...economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment [§15126.2(d)]." This section of the EIR is intended to evaluate the impacts of such growth in the surrounding environment.

The proposed project would provide a municipal service to a growing urban area. The landfill capacity proposed could accommodate some growth; however, landfill capacity has not historically been a constraint to growth in California.

The services necessary for the landfill extension would be a continuation of existing operations and incremental changes in operations that may be necessary or desirable for the remaining life of the landfill as recycling technology advances. The proposed project would not represent any encouragement or facilitation of new growth in the area. In addition, cities, including the City of San José, are moving towards waste reduction. Therefore, the future is less dependent on landfill capacity due to increases in recycling and the movement towards zero-waste.

Impact GRO – 1: Based on the above discussion, the proposed project would not result in significant growth-inducing impacts. **(Less Than Significant Impact)**

Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, are considerable or which compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant projects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts “when the project’s incremental effect is cumulatively considerable.” The discussion does not need to be in as great detail as is necessary for project impacts, but is to be “guided by the standards of practicality and reasonableness.” The purpose of the cumulative analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence. To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document. The analysis must then determine whether the project’s contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3).

The analysis in this section is based upon consideration of a list of approved and pending projects near the project site (refer to Table 6.0-1).

Given the nature of the pending and approved projects in Table 6.0-1, their locations, and the impacts and scale of the proposed project, the issue areas for which cumulative impacts could be substantial include air quality, odors, biological resources, hydrology and water quality, and global climate change. The projects included in the cumulative analysis may have other significant impacts, but the specific project evaluated in this EIR would not increase or result in cumulatively considerable significant impacts on those particular resources. Those areas of impact are, therefore, not discussed in this section. For example, since the project proposes to not increase haul traffic volumes over existing levels, the proposed project would not result in an increase in traffic and therefore, would not contribute to cumulative traffic impacts. In addition, as discussed in **Section 3.2 Transportation**, if the hours of operation for the landfill and Recyclery are shortened, the City would require that the hours of operation be set by PD Permit with subsequent CEQA review to avoid peak hour impacts. For these reasons, cumulative traffic impacts are not discussed.

Table 6.0-1: Cumulative Projects List		
Name of Project	Location	Brief Description
APPROVED PROJECTS		
1. South Bay Salt Pond Restoration Project	Along the South San Francisco Bay. There are three main restoration pond areas: 1) Eden Landing near Hayward, 2) Ravenswood near East Palo Alto, and 3) Alviso. The Alviso ponds are closest to the project site.	Restoring 15,100 acres of industrial salt ponds to tidal wetlands and other habitats.
2. Zanker Material Recycling Facility Project (PDC06-120)	675 Los Esteros Road in Alviso	Development of a 200,000 square foot materials recovery facility building and relocation of existing material recycling activities indoors. Other components of the project include increasing the peak daily tonnage received and processed to 5,000 tons; allowing the acceptance, transfer off-site, and possible future screening and sorting of green/yard waste and MSW including food waste inside the MRF building, relocating and expanding the scale house facilities; allowing site operations to occur 24 hours per day, seven days a week; using the surface of the existing on-site landfill after it closes for ancillary operations; and installing new outdoor lighting at new facilities.
3. Nadev Printing	47422 Kato Road in Fremont	Development of 335,660 square feet of general industrial uses.
4. Robson Homes Development	48835 Kato Road in Fremont	Development of 114 townhouses.
5. KB Home Development	48921 Warm Springs Boulevard in Fremont	Development of 142 detached single-family houses, 95 attached townhouses, and 105 condominiums.
6. Fremont Tech Center Phase I	2703 Lakeview Court in Fremont	Development of 76,847 square feet of research & development and 59,883 square feet of light industrial uses.
7. Fremont Tech Center Phase II	Lakeview Drive (500 feet south of Phase I) in Fremont	Development of 76,548 square feet of light industrial uses.
8. Apton Plaza	230 North Main Street, Milpitas	Development of a 93 condominiums and 2,633 square feet of commercial uses.
9. Alexan	1556 South Main Street, Milpitas	Development of 397 apartments on a 5.9-acre site.
10. Aspen Family	1666 South Main Street, Milpitas	Development of 101 apartments on a 2.69-acre site.

Table 6.0-1: Cumulative Projects List

Name of Project	Location	Brief Description
11. Fairfield Murphy Ranch	Murphy Ranch Road in Milpitas	Development of 285 townhouses and 374 apartments on an approximately 22-acre site.
12. Centria	Abel Street/Main Street/Great America Parkway in Milpitas	Development of 464 condominiums on a 8.19-acre site.
13. Matteson	South Main Street/South Abel Street in Milpitas	Development of 126 condominiums on a 2.72-acre site.
14. Terra Serena	East and west sides of Abel Street, north of Curtis Avenue in Milpitas	Development of 368 single-family and townhouses, and 315 condominiums
15. Paragon	1696 South Main Street and 75 Montague Expressway	Development of 147 condominiums on a 4.56-acre site.
16. Devries Place	West side of North Main Street in Milpitas	Development of 103 affordable senior housing units on a 2.3-acre site.
17. Town Center Villas	East Calaveras Boulevard/North Milpitas Boulevard/Hillview in Milpitas	Development of 65 townhouses on a 4.8-acre site.
18. Venture Corporation	110 Cadillac Court, Milpitas	Development of 10 industrial R&D condominium buildings
19. Landmark Tower	600 Barber Lane, Milpitas	Development of 375 condominiums, 148,805 square feet of retail uses, and 48,960 square feet of office uses.
20. Mixed-Use Project	1880 North Milpitas Boulevard, Milpitas	Development of 13,040 square feet of uses including retail, office, and three one-bedroom units.
21. Sinclair Renaissance	253 Sinclair Frontage Road, Milpitas	Development of 80 single-family residential units on a 9.65-acre site.
22. The Campus at McCarthy Ranch	115-245 North McCarthy Boulevard, Milpitas	Development of approximately 1.4 million square feet of office uses.
23. Peery-Arrillaga	McCarthy Boulevard at Alder Drive in Milpitas	Development of 238,400 square feet of office development.
24. South Bay Honda Dealership	920 Thompson Street, Milpitas	Development of a 47,000 square foot auto sales and repair facility.
25. Transit Area Specific Plan	Vicinity of Great Mall Parkway, South Main Street, Trade Zone Boulevard, and Milpitas Boulevard in Milpitas	Development of 7,109 residential units, 993,843 square feet of office uses, 287,075 square feet of retail uses, and 350 hotel rooms.
26. I-880 HOV Lane Widening Project	I-880 between SR 237 and US 101	Widening I-880 to include one HOV lane in each direction from SR 237 to US 101.

Table 6.0-1: Cumulative Projects List		
Name of Project	Location	Brief Description
27. SR 237 Express Lane Project	Dixon Landing Road on I-880 to First Street on SR 237	Adding one express lane (or HOT lane) in each direction from Dixon Landing on I-880 to First Street on SR 237.
PENDING PROJECTS		
28. Zanker Road Resource Recovery (PDC08-042)	705 Los Esteros Road, San José	Rezoning to allow continued use of resource recovery after landfill closure on an approximately 70-acre site.
29. Zanker Road Resource Recovery (PDC08-054)	Between Los Esteros Road and Grant Boulevard in San José	Rezoning to allow redesign of a driveway and a wetlands exchange on a 52.5 gross acre site.
30. The Offices @ First Street (H09-002)	110 Holger Way, San José	Site development permit to allow an additional 420,000 square feet to a previously approved site development permit (H07-018) to allow height increase of a free-standing garage structure from 6 th floor to 7 th floor (approximately 170 feet) on a 6.9 gross acre site.
31. Airport West Stadium/Great Oaks Place (PDC09-004, PDC07-098)	14.5-acre site located at the southwest quadrant of Coleman Avenue and Newhall Drive and a 76-acre site located adjacent to and just north of State Route 85, west of Monterey Highway. Both sites are in San José.	Rezoning to allow for the construction of an 18,000-seat professional sports stadium on 14.5-acres; and a General Plan amendment and rezoning of the 76-acre site to allow for the development of between 1,100 and 1,500 residential units.
32. Ohlone Mixed Use (PDC08-061)	860 West San Carlos Street, San José	Rezoning to remove three existing warehouse buildings and allow up to 825 multi-family residences and 50,000 square feet of commercial uses on a 8.25 gross acre site.
33. Newby Island Sanitary Landfill and The Recyclery Rezoning (PDC07-07) <i>Project analyzed in this EIR</i>	1601 Dixon Landing Road, San José	Rezoning of the Newby Island Sanitary Landfill and the adjacent Recyclery to allow the maximum height of the landfill to be raised to 245 feet above mean sea level (NGVD29) and conform and clarify the legal non-conforming uses on the landfill and specify the allowable current and future uses on the landfill property and Recyclery. Refer to Section 1.0 of this EIR for more detail.
34. Envision San José 2040 General Plan Update	Areas within the existing Urban Growth Boundary in the City of San José as well as all areas within the City's Sphere of Influence	Updating the City's General Plan. Four growth scenarios will be analyzed, including one that would add up to 158,970 new residential units and another that would add up to 526,050 new jobs in the City.

Table 6.0-1: Cumulative Projects List		
Name of Project	Location	Brief Description
35. Creekside Landing Shopping Center	Between the south terminus of Fremont Boulevard and Dixon Landing Road in Fremont	Project would construct a new retail center consisting of approximately 524,000 square feet of commercial/retail uses and extend Fremont Boulevard to Dixon Landing Road.
36. Solyndra Project	47422 Kato Road in Fremont	Development of 609,000 square foot manufacturing facility.
37. Milpitas Square	East side of Barber Lane and Barber Court at the terminus of Bellew Drive in the City of Milpitas	General Plan amendment and rezoning to allow for the development of up to 900 residential units and a total of 175,000 square feet of commercial uses on the site.
38. Parktown Shopping Center	1350 South Park Victoria Drive, Milpitas	Development of 5,400 square feet of commercial uses.
39. Gold Street Education Center	The site is on the east side of Gold Street just south of the Guadalupe River in the Alviso area of San José.	Development of an educational center with a gazebo, paths connecting educational kiosks, restrooms, and a ten-stall parking lot.
PROJECTS IN THE PLANNING PROCESSES		
40. San José/Santa Clara Water Pollution Control Plant (WPCP) Master Plan	700 Los Esteros Road, San José	The City is currently in the planning stages for a Master Plan for the WPCP. The Master Plan will address how to rebuild the wastewater treatment facility and use the 2,600-acre property. New land uses could include kayaking, trails, a clean-tech center, and/or jobs-based development.

6.1 VISUAL AND AESTHETICS

As described in **Section 3.2 Visual and Aesthetics**, the project would not result in significant impacts to scenic vistas or scenic resources, or substantially degrade the existing visual character or quality of the site, nor would the project create a new source of substantial light or glare that would adversely affect day or nighttime views of the area.

6.1.1 Thresholds of Significance

Consistent with the thresholds used by the City in evaluating project-specific visual and aesthetics impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area.

6.1.3 Discussion of Impacts and Conclusion

As discussed in **Section 3.2**, the proposed increase of NISL's permitted height to 245 feet (NGVD29) would alter the visual character of the site but would not substantially degrade it. In addition, the project would not result in significant new impacts to visual resources or scenic views including views from I-880, the Bay Trail, and Refuge. Some of the cumulative projects, including Landmark Tower and Milpitas Square in the city of Milpitas, are high-rise buildings that could change the visual character of the area in which they are developed/proposed and affect visual resources or scenic views. However, the cumulative projects are generally located in different view sheds and context (*e.g.*, urban setting verses less urbanized bayside) than the proposed project.

In addition, as discussed in the City's 2002 Final Environmental Impact Report for Newby Island General Plan Amendments and Planned Development Rezoning, all of the land between I-880 and the proposed Fremont Boulevard alignment north of Dixon Landing Road, and most of the land west of I-880 and south of Dixon Landing Road is designated for future urban uses (*e.g.*, the proposed Creekside Landing Shopping Center).¹¹³ The 2002 Final EIR found that the development of the D-shaped area as a corporation yard which would have only limited off-site visibility because of its location behind existing levees, would not result in substantial, adverse visual or aesthetic impacts.

For these reasons, the project does not contribute to cumulative visual and aesthetics impacts.

Impact C-AES – 1: The proposed project would not contribute to a cumulatively significant visual and aesthetics impact. **(Less Than Significant Cumulative Impact)**

¹¹³ The GPA proposed in the 2002 EIR for Newby Island was approved, however, the PD Zoning was not approved and is inactive.

6.2 AIR QUALITY

As described in **Section 3.4 Air Quality**, the project would not result in significant impacts to regional or local air quality or odor impacts. The following discussion evaluates whether the project, along with the cumulative projects, would result in significant cumulative air quality impacts.

6.2.2 Thresholds of Significance

Consistent with the BAAQMD CEQA Guidelines (1999), for any proposed project that does not individually have significant operational air quality impacts, the determination of significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan *and* of the general plan with the regional air quality plan (*i.e.*, the *Bay Area 2005 Ozone Strategy*).

6.2.3 Discussion of Impacts and Conclusion

6.2.3.1 *Consistency with the Bay Area 2005 Ozone Strategy*

As discussed in **Sections 3.1 Land Use** and **2.0 Consistency with Relevant Plans and Policies**, the project is consistent with the City's General Plan, including the Land Use/Transportation Diagram and applicable major strategies, goals and policies, and the Alviso Master Plan. Also, as discussed in **Section 2.0 Consistency with Relevant Plans and Policies**, the project would not result in an increase in housing within the region or a substantial increase in jobs not foreseen in the current General Plan and *Bay Area 2005 Ozone Strategy*. Therefore, the project is consistent with the *Bay Area 2005 Ozone Strategy*. For these reasons, the project would not result in a cumulative air quality impact.

Impact C-AIR – 1: The project would not result in a cumulative air quality impact. (**Less Than Significant Cumulative Impact**)

6.2.3.2 *Odor Impacts*

The proposed project includes odor sources, some of which (outdoor food waste processing at the Recyclery) are not allowed by the current zoning, but would be allowed by the proposed zoning. The food waste processing is less than one mile from the nearest residences, which are in Milpitas. There are a number of other existing odor sources in the project area besides the landfill and Recyclery, including the WPCP and its biosolid lagoons, the working face of the NISL, and the mudflats next to the Bay (which can become anaerobic at low tide). The food waste is currently being processed at the proposed location and it cannot be ascertained to what extent, if any, that activity has contributed to the 158 odor complaints lodged against Newby Island in the last three years (between September 30, 2005 and September 30, 2008). In addition, as discussed in Section 3.4.2.2, while the project would allow more waste to be deposited at the landfill and allow food waste to be processed on the Recyclery property, the project would not result in more waste or food waste being exposed at once than occurs under existing conditions. For these reasons, the project would result in a less than significant cumulative odor impact.

Impact C-AIR – 2: The proposed project would result in a less than significant cumulative odor impact. (**Less Than Significant Cumulative Impact**)

6.3 BIOLOGICAL RESOURCES

Currently, landfill and Recyclery operations could be impacting biological resources. As described in **Section 3.6 Biological Resources**, the project would prevent some existing impacts from continuing to occur with the implementation of the identified mitigation measures. The following discussion evaluates whether the project, along with the cumulative projects, would result in significant cumulative impacts to biological resources.

6.3.1 Thresholds of Significance

Consistent with the thresholds used by the City in evaluating project-specific impacts to biological resources, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

6.3.2 Discussion of Impacts and Conclusion

Numerous past, current, and foreseeable future projects in the South Bay will affect the habitats and species that have been and would be affected by the operations at Newby Island and will be impacted by the proposed project. One of these projects, the South Bay Salt Ponds Restoration project, would restore habitat for the wetland species that use marshes adjacent to the landfill, thus benefitting these species. Other projects, such as development projects, may adversely affect plant and animal species present in the area, including both special-status species and more common, widespread species. Cumulatively, these projects will result in some losses of individuals of common species and habitats that will not be mitigated, since these impacts are considered less than significant individually for each project, as well as impacts to sensitive habitats and special-status species that are likely to require mitigation. For example, the Zanker Road Resource Recovery projects (PDC08-042 and PDC08-54), would result in less than significant impacts to the burrowing owl, salt marsh harvest mouse, salt marsh wandering shrew, California clapper rail, and western snowy plover with the implementation of project specific mitigation/avoidance measures.

The proposed project is one of several landfills in the south San Francisco Bay Area that accept (or until recently accepted) food waste and that have the potential to support nuisance species. Others

include the Tri-Cities Landfill (which closed in 2007), Ox Mountain Landfill, Palo Alto Landfill, Kirby Canyon Landfill, and Guadalupe Landfill. The provision of food to nuisance species by these other landfills also has the potential to affect sensitive species, both in the South Bay and in the nuisance birds' staging and breeding areas, for reasons described in **Section 3.6** of this EIR. Other (non-landfill) anthropogenic food sources such as roadside waste, road-killed animals, open dumpsters, and feral cat feeding stations also contribute to cumulative effects from anthropogenically-subsidized nuisance species on sensitive species by maintaining predator and competitor populations at levels higher than would naturally occur. While these activities have a significant cumulative effect, the contribution to this effect from the Newby Island Landfill project will be mitigated with the implementation of mitigation measure **MM BIO – 13.1 and 13.2** in **Section 3.6** of this EIR. However, as discussed in **Section 3.6**, the approval of the project would extend the useful life of the landfill and therefore, could allow the project's less than significant impacts to biological resources to occur over a longer period of time.

The South Bay Salt Ponds Restoration project will begin implementing its Phase 1 activities in 2009. Among these Phase 1 activities will be the reconfiguration of Pond A16, located approximately 1.5 miles southwest of the project site, by the creation of numerous nesting islands for waterbirds and management of shallow water levels. Although the modifications being made to this pond are intended to benefit nesting terns and snowy plovers, as well as foraging shorebirds and waterfowl, there is some concern that these islands will instead be colonized by more aggressive California gulls, or that nesting terns and plovers on these islands may be depredated by gulls, given the proximity of Pond A16 both to the Newby Island landfill and to the existing gull colony in Pond A6. Although the Salt Ponds Restoration will take measures to minimize the likelihood of gull colonization of these islands, sustained or increased food availability to gulls at South Bay landfills would exacerbate potential gull impacts at Pond A16. Implementation of mitigation measure **MM BIO – 13.1 through and 13.3** in **Section 3.6** of this EIR would be necessary to avoid contributing to cumulative impacts that gulls are likely having on sensitive species in the South Bay. Phase I activities also include restoring former salt pond A6, which is approximately 3.8 miles west of the project site, either through intentional breaching or "natural" breaching of the levee. This will displace tens of thousands of breeding California gulls. Continued landfill operations would maintain a very attractive food resource for these displaced gulls and would make them more likely to seek out alternative breeding sites in the South bay (e.g., islands created for snowy plovers). The consulting biologists believe that full implementation of the nuisance species abatement plan (as well as **MM BIO – 13.2, and MM BIO – 13.3** if necessary) would mitigate this and likely encourage many of the gulls to move elsewhere due to scarcer resources.

Due to the regional abundance of some of the resources that would be impacted by the proposed project (such as ruderal habitats), the measures incorporated into this project to avoid impacts to sensitive habitats and species (such as avoidance of impacts to the wetlands surrounding the project site), and mitigation measures for burrowing owls and nuisance species, this project would not have a cumulatively considerable contribution to cumulative impacts to biological resources.

Impact C-BIO -1: The proposed project, with the implementation of mitigation measures identified in **Section 3.6** of this EIR, would not have a cumulatively considerable contribution to cumulative impacts to biological resources.
(Less Than Significant Cumulative Impact)

6.4 HYDROLOGY AND WATER QUALITY

As described in **Section 3.8 Hydrology and Water Quality**, the project would not result in significant hydrology or water quality impacts. The following discussion evaluates whether the project, along with the cumulative projects, would result in significant cumulative hydrology and water quality impacts.

6.4.1 Threshold of Significance

Consistent with the thresholds used by the City in evaluating project-specific hydrology and water quality impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

6.4.2 Discussion of Impacts and Conclusion

The cumulative projects in the City of San José would be required to conform to the City's NPDES permit or individual site NPDES permits, which includes implementation of BMPs to reduce stormwater pollution to the maximum extent practicable, the City's Post-Construction Urban Runoff Management Policy 6-29 (where applicable), and the City's Post-Construction Hydromodification Management Policy 8-14 (where applicable) to reduce hydrology and water quality impacts. The cumulative projects in the adjacent cities of Fremont and Milpitas would also be required to comply with their city's NPDES permit. As discussed in **Section 3.8 Hydrology and Water Quality**, the landfill's continued compliance with its own NPDES General Permit and implementation of its SWPPP to minimize and reduce pollutants in stormwater runoff and pollution in stormwater discharge would result in less than significant water quality impacts. For these reasons, the

cumulative projects, including the proposed project, would not result in significant cumulative impacts to hydrology and water quality.

Impact C-HYD – 1: The cumulative projects, including the proposed project, would not contribute to significant cumulative hydrology and water quality impacts. **(Less Than Significant Cumulative Impact)**

6.5 GLOBAL CLIMATE CHANGE

6.5.1 Greenhouse Gas Emission and Global Climate Change

6.5.1.1 *Overview*

This section provides a general discussion of global climate change and focuses on emissions from human activities that alter the chemical composition of the atmosphere. The discussion on global climate change and greenhouse gas emission is based upon the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32), the 2006 Climate Action Team (CAT) Report to Governor Schwarzenegger and the Legislature, and research, information and analysis completed or otherwise provide by the International Panel on Climate Change (IPCC), the United States Environmental Protection Agency, California Air Resources Board, and the CAT. Estimates of greenhouse gas emissions for the project are provided in Appendix I of this EIR.

Global climate change refers to changes in weather including temperatures, precipitation, and wind patterns. Global temperatures are modulated by naturally occurring and anthropogenic-generated (generated by mankind) atmospheric gases such as carbon dioxide, methane, and nitrous oxide.¹¹⁴ These gases allow sunlight into the Earth's atmosphere but prevent heat from radiating back out into outer space and escaping from the earth's atmosphere, thus altering the Earth's energy balance. This phenomenon is known as the greenhouse effect.

Naturally occurring greenhouse gases include water vapor¹¹⁵, carbon dioxide, methane, nitrous oxide, and ozone. Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but are for the most part solely a product of industrial activities. The major greenhouse gases, other than water vapor, are briefly described below.¹¹⁶

- **Carbon Dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, respiration, and as a result of other chemical reactions (*e.g.*, manufacturing of cement). Carbon dioxide is also removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **Nitrous Oxide (N₂O)** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

¹¹⁴ IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: <http://ipcc.ch/>

¹¹⁵ Concentrations of water are highly variable in the atmosphere over time, with water occurring as vapor, cloud droplets and ice crystals. Changes in its concentration are also considered to be a result of climate feedbacks rather than a direct result of industrialization or other human activities. For this reason, water vapor is not discussed further as a greenhouse gas.

¹¹⁶ U.S. EPA, 2009 U.S. Greenhouse Gas Inventory Report, <http://www.epa.gov/climatechange/emissions/usinventoryreport.html> (accessed April 20, 2009) and National Oceanic and Atmospheric Administration, Greenhouse Gases Frequently Asked Questions, <http://lwf.ncdc.noaa.gov/oa/climate/gases.html> (accessed April 22, 2009).

- **Fluorinated Gases** are synthetic, strong greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases. High Global Warming Potential gases are emitted from a variety of industrial processes including aluminum production, semiconductor manufacturing, electric power transmission, and magnesium production and processing, and the production of HCFC-22, a hydrochlorofluorocarbon used as a refrigerant and in air conditioners.

The world's leading climate scientists have reached consensus that global climate change is underway, is "very likely" caused by humans, and hotter temperatures and rises in sea level "would continue for centuries," no matter how much humans control future emissions. A report of the Intergovernmental Panel on Climate Change (IPCC), an international group of scientists and representatives concluded "the widespread warming of the atmosphere and ocean, together with ice-mass loss, support the conclusion that it is extremely unlikely that global climate change of the past 50 years can be explained without external forces, and very likely that it is not due to known natural causes alone."¹¹⁷

Human activities have exerted a growing influence on some of the key factors that govern climate by changing the composition of the atmosphere and by modifying vegetation. The concentration of carbon dioxide in the atmosphere has increased from the burning of coal, oil, and natural gas for energy production and transportation and the removal of forests and woodlands around the world to provide space for agriculture and other human activities. Emissions of other greenhouse gases, such as methane and nitrous oxide, have also increased due to human activities. Carbon dioxide accounts for approximately 85 percent of total emissions, and methane and nitrous oxide account for almost 14 percent. Each of these gases, however, contributes to global warming at a different relative rate. Methane has a global warming potential 23 times that of carbon dioxide, while nitrous oxide is 296 times that of the same amount of carbon monoxide. To account for these differences, estimates of greenhouse gas emissions are often described in terms of carbon dioxide equivalents.

In 2007, the IPCC predicted a temperature increase of between two and 11.5 degrees Fahrenheit (F) (1.1 and 6.4 degrees Celsius) by the end of the 21st century under six different scenarios of emissions and carbon dioxide equivalent concentrations.¹¹⁸ Sea levels were predicted to rise by 0.18 to 0.59 meters (seven to 23 inches) during this time, with an additional 3.9 to 7.8 inches possible depending upon the rate of polar ice sheets melting from increased warming. The IPCC report states that the increase in hurricane and tropical cyclone strength since 1970 can likely be attributed to human-generated greenhouse gases.

On a per person basis, greenhouse gas emissions are lower in California than most other states; however, California is a populous state and the second largest emitter of greenhouse gases in the United States and one of the largest emitters in the world.¹¹⁹ Transportation is the largest source of

¹¹⁷ *Climate Change 2007 – The Physical Science Basis Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. February 2, 2007. [<http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>]

¹¹⁸ IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. [<http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>]

¹¹⁹ California Legislative Analyst's Office. 2006. *Analysis of the 2006-07 Budget Bill (Governor's Climate Change Initiative)*. [http://www.lao.ca.gov/analysis_2006/resources/res_04_an106.html]

greenhouse gas emissions in California, followed by industrial sources and electric power generation.¹²⁰

According to the Draft 2009 Climate Action Team Report¹²¹ the following climate change effects and conditions can be expected in California over the course of the next century:

- **Warming Trends.** Increasing temperatures with summer warming increasing from about 0.9 to 3.6 degrees Fahrenheit (F) in the first 30 years of the 21st century and from about 2.7 to 10.5 degrees F in the last 30 years of the 21st century.
- **Precipitation.** Changes in precipitation patterns and earlier melting of the Sierra snow pack that will have an effect on river flows, runoff, and water supplies in California.
- **Sea-Level Rise.** By 2050, sea-level rise could range from 11 to 18 inches higher and by 2100 sea-level rise could be 23 to 55 inches (which is up to about 4.5 feet) higher than in the year 2000. As sea level rises, major transportation infrastructure could be inundated and there also will be an increased rate of coastal flooding when high tides coincide with winter storms. Other impacts of sea-level rise include loss of coastal habitats (such as beaches and wetlands), direct impacts to coastal communities, and biodiversity reduction due to species loss.
- **Agriculture.** Increased challenges for the state's agricultural sector from temperature and precipitation effects on crop yields, crop losses from extreme weather events, and changes to pest and weed ranges.
- **Forestry.** Increased vulnerability of forests due to pest infestation, increased temperatures, wildfire frequency, and precipitation changes.
- **Water Resources.** Reduced reliability of State Water Project (SWP) and Central Valley Project (CVP) water supply systems due to the interaction of projected growth, a warmer-drier climate resulting in reduced streamflows and reservoir storage, and salinity increases in the Delta.
- **Coastal Areas.** Coastal erosion of beaches (especially during severe winter storms), and impacts to property, infrastructure, and housing due to flooding in coastal areas and the San Francisco bay area (including due to levee breaching).
- **Energy.** Increased electricity demand, particularly in the Central Valley, during hot summer months and possible reductions in energy generation from hydropower systems due to changes in runoff patterns.
- **Air Quality.** Increased concentrations of ozone and particulate matter associated with higher temperatures and increased natural biogenic emissions, which could impact air quality (particularly in the South Coast and San Joaquin air basins).
- **Public Health.** Effects on public health due to an increased frequency, duration and severity of heat events, increased air pollution, wildfire outbreaks, spread of water- and vector-borne diseases, and physical events such as flooding. Air pollution and increased wildfires have the potential to increase respiratory problems.

The report concludes that extreme events from heat waves, floods, droughts, wildfires, and bad air quality are likely to become more frequent in the future in California.

¹²⁰ California Air Resources Board. 2008. Climate Change Scoping Plan. <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>

¹²¹ California Environmental Protection Agency. 2009. *Draft Climate Action Team Report to Governor Schwarzenegger and the Legislature*. April 1, 2009. <http://www.climatechange.ca.gov/publications/cat/> (accessed April 22, 2009)

6.5.1.2 *Regulatory Context for Global Climate Change*

Global climate change resulting from greenhouse gas emissions is an emerging environmental concern being raised and discussed at the international, national, and statewide level. At each level, agencies are considering strategies to control emissions of gases that contribute to global warming.¹²² Regulatory efforts in California that apply to the project are summarized below.

State of California Executive Order S-3-05

In June 2005, the Governor of California signed Executive Order S-3-05 which identified Cal/EPA as the lead coordinating State agency for establishing climate change emission reduction targets in California. A multi-agency “Climate Action Team” was set up to implement Executive Order S-3-05. Under this order, the state plans to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050. Greenhouse gas emission reduction strategies and measures to reduce global warming were identified by the California Climate Action Team in 2006 and in the Climate Change Scoping Plan adopted in December 2008.¹²³

Assembly Bill 32 – The California Global Warming Solutions Act of 2006

Subsequently, in the fall of 2006, California Assembly Bill 32 (AB 32), the global warming bill, was signed into law. AB 32 (California Health and Safety Code Section 38500 et seq.) requires the state Air Resources Board (ARB) to adopt regulations by set dates to require reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with that program. The bill requires achievement by 2020 of a statewide greenhouse gas emissions limit equivalent to 1990 emissions, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions. It is estimated that to reduce greenhouse gas emissions levels from 2020 to 1990 levels, a 28 to 33 percent reduction of “business-as-usual” greenhouse gas emissions would be required.¹²⁴

Strategies identified by ARB to reduce greenhouse gas emissions include, but are not limited to, new vehicle emission standards, enforcement of diesel truck anti-idling requirements, capture of more methane from landfills, hydrofluorocarbon (HCF) reduction strategies for the use and disposal of refrigerants, manure management in agricultural operations, and increased use of alternative, low-carbon fuels.

¹²² On April 2, 2007, the United States Supreme Court issued a 5-4 decision in *Massachusetts v. EPA*, which holds that the USEPA has authority under the Clean Air Act to regulate greenhouse gas emissions from new vehicles. The USEPA had previously argued it lacked legal authority under the Clean Air Act to regulate greenhouse gases. The majority opinion of the Supreme Court decision noted that greenhouse gases meet the Clean Air Act’s definition of an “air pollutant,” and the EPA has the statutory authority to regulate the emission of such gases from new motor vehicles.

¹²³ California Environmental Protection Agency. 2006. *Climate Action Team Executive Summary Climate Action Team Report to Governor Schwarzenegger and the California Legislature*. [http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.pdf] and California Air Resources Board. 2008. Climate Change Scoping Plan.

¹²⁴ California Air Pollution Control Officers Association. CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008. Available at: <http://www.capcoa.org>.

As part of implementation of AB 32, a statewide 1990 Greenhouse Gas Emissions inventory and 2020 Emissions Limit were adopted by the ARB in 2007. ARB's mandatory reporting regulation was approved by the Board in December 2007, and became effective on December 2, 2008. Starting in 2009, facilities in several key industrial sectors, such as electricity generation, petroleum refineries and cement manufacturing, are required to report greenhouse gas emissions. The ARB also approved another key requirement of AB 32, the Climate Change Scoping Plan, on December 11, 2008. The Scoping Plan, developed by ARB with input from the Climate Action Team, proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, and enhance public health while creating new jobs and enhancing the growth in California's economy. The Scoping Plan identifies recommended actions for the recycling and waste sector including landfill methane control, increased efficiency of landfill methane capture (see California Air Resources Board Landfill Early Action Measures discussion below), and high recycling/zero waste. The ARB is currently working on additional regulations to implement the Scoping Plan. Regulations to obtain the maximum technologically feasible and cost-effective reductions in greenhouse gases are to be adopted by January 1, 2011.

Senate Bill 97 – Modification to the Public Resources Code

On August 24, 2007, Governor Schwarzenegger signed Senate Bill 97 (SB 97) which requires the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, including, but not limited to effects associated with transportation or energy consumption. The Resources Agency is required to certify and adopt these guidelines by January 1, 2010.

At the direction of the Governor's Office of Planning and Research, ARB developed preliminary recommendations for statewide interim thresholds of significance for greenhouse gas emissions. ARB focused on common project types that, collectively, are responsible for substantial greenhouse gas emissions – specifically industrial, residential, and commercial projects. These recommended approaches have not been adopted by ARB and additional workshops are not currently scheduled.

Preliminary Draft CEQA Guideline Amendments for Greenhouse Gas Emissions

OPR has drafted amendments to the CEQA Guidelines for greenhouse gas emissions as required by SB 97. OPR held two workshops in January 2009 to present the amendments and obtain input from the public. Comments received on the amendments are currently being considered by OPR as part of the process for adopting the regulations by 2010. Under the June 2009 *Draft CEQA Guideline* amendments, changes to the CEQA Guidelines address determination of a project's incremental contribution to a cumulative effect, determining the significance of impacts from Greenhouse Gas Emissions, consistency with plans, mitigation measures related to greenhouse gas emissions, and tiering from an environmental impact report (EIR). In the proposed CEQA Guideline changes, Lead Agencies would retain discretion to establish thresholds of significance based on individual circumstances. Thresholds developed by other agencies may be used so long as the threshold chosen is supported by substantial evidence. Currently there is no established guidance, from the state or in published CEQA case law, for the determination of what constitutes a significant global climate change impact or what measures are necessary to off-set new greenhouse gas emissions.

Proposed Revisions to BAAQMD CEQA Guidelines

The adopted BAAQMD CEQA Guidelines (1999) provides procedures for evaluating possible air quality impacts from proposed projects and plans consistent with CEQA requirements. The current guidelines do not include procedures for analyzing greenhouse gas emissions or a threshold of significance for these emissions.

BAAQMD recently released CEQA Draft Air Quality Guidelines (September 2009), which is an update to its current CEQA Guidelines. The draft guidelines include new and updated thresholds for analyzing air quality impacts, including a threshold for greenhouse gas emissions. Under the proposed threshold, if a project would result in operational-related greenhouse gas emissions of 1,100 metric tons of carbon dioxide equivalents a year or more, it would make a cumulatively considerable contribution to greenhouse gas emissions and result in a cumulatively significant impact to global climate change. The BAAQMD CEQA Draft Air Quality Guidelines also outline a methodology for estimating greenhouse gases, including use of the URBEMIS model for direct emissions from land use projects.

The Draft Air Quality Guidelines (if adopted) would supersede BAAQMD's current BAAQMD CEQA Guidelines (1999). It is anticipated by BAAQMD that their CEQA Air Quality Guidelines update will be adopted by October 2009.

California Air Resources Board Landfill Early Action Measures

The project would be subject to the Landfill Early Action Measures (EAM) proposed by the California Air Resources Board. The EAM will be effective beginning in 2012. The EAM would require additional and enhanced surface emissions monitoring (SEM) at the project site, but is unlikely to require the expansion of the existing gas collection and control system since the BAAQMD landfill gas control requirements under Rule 8-34 are stringent (see **Section 3.4** for more discussion on Rule 8-34).

City of San José Strategies, Goals, and Policies

At the local level, the City's General Plan has strategies, goals, and policies in place to reduce its greenhouse gas emissions and impact on global climate change which include the following:

- *Urban Conservation/Preservation Strategy*
- *The Greenline/Urban Growth Boundary*
- *Sustainable City Strategy*
- *Solid Waste Goal 2* – extend the life span of existing landfills by promoting source reduction, recycling, composting, and transformation of solid wastes.
- *Solid Waste Goal 5* – achieve a high level of public awareness of solid waste issues and alternatives to landfilling.
- *Urban Forest Goal* – preserve, protect, and increase plantings of urban trees within the City.
- *Air Quality Policy 2* – expansion and improvement of public transportation services and facilities should be promoted, where appropriate, to both encourage energy conservation and reduce air pollution.
- *Air Quality Policy 6* – continue to actively enforce the City's ozone-depleting compound ordinance and supporting policy to ban the use of chlorofluorocarbon compounds in packaging

and in building construction and remodeling to help reduce damage in the global atmospheric ozone layer.

- *Energy Goal* – the City should foster development which, by its location and design, reduces the use of non-renewable energy resources in transportation, buildings, and urban services (utilities) and expands the use of renewable energy resources.
- *Energy Policy 9* – the City should encourage the development of renewable energy sources and alternative fuels and cooperate with other public and quasi-public agencies.

In addition, the *San José Green Vision* adopted in October 2007, is a 15-year plan to transform the City into a world center of Clean Technology, promote cutting-edge sustainable practices, and demonstrate that the goals of economic growth, environmental stewardship and fiscal responsibility are inextricably linked. The 10 goals of the *Green Vision* are as follows:

1. Create 25,000 Clean Tech jobs as the World Center of Clean Tech Innovation;
2. Reduce per capita energy use by 50 percent;
3. Receive 100 percent of our electrical power from clean renewable sources;
4. Build or retrofit 50 million square feet of green buildings;
5. Divert 100 percent of the waste from our landfill and convert waste to energy;¹²⁵
6. Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day);
7. Adopt a General Plan with measurable standards for sustainable development;
8. Ensure that 100 percent of public fleet vehicles run on alternative fuels;
9. Plant 100,000 new trees and replace 100 percent of our streetlights with smart, zero-emission lighting; and
10. Create 100 miles of interconnected trails.

The City of San José has also adopted a Green Building Policy, which fosters long-term social, economical, and environmental sustainability in public building and development while making green building the standard practice in San José and sustainability as a core value to the community. The vision for Green Building in San José is a place where the people have knowledge and opportunities to build and occupy dwellings that have a maximum impact on the well being of the occupants and minimal impact on the environment. The Green Building Policy goals center on five main categories: sustainable sites, energy and atmosphere, water efficiency, materials and resources, and indoor environmental quality.

In October 2008, the City Council adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards. The proposed project would be subject to this policy.

6.5.1.3 Climate Action Plan

The City of San José Department of Environmental Services is currently preparing a Climate Action Plan for San José that will identify current and projected greenhouse gas emissions and measures for local government and the community to implement to reduce and avoid greenhouse gas emissions. The Climate Action Plan will include community input and is anticipated to be completed in 2010.

¹²⁵ While the City of San José has a goal to divert 100 percent of its waste from landfills, the expected date of achieving this goal is unknown at this time. Therefore, this goal does not play a substantial role in the proposed capacity increase for NISL. In addition, the landfill has contracts with other cities for future waste.

Given the global scope of global climate change and the large quantity of greenhouse gas emissions, the challenge under CEQA is for a Lead Agency to present information on the possible impacts of a project on global warming in a way that is meaningful to the decision making process. Under CEQA, there are two essential questions: would the project increase or substantially contribute to an environmental impact *or* would the project be subject to impacts from the environment associated with global climate change. Accordingly, projects can both contribute to global climate change and be exposed to impacts from global climate change, and mitigation measures can be identified to minimize project impacts to and from global climate change.

6.5.2 *Thresholds of Significance*

As discussed above, OPR is currently developing amendments to the CEQA Guidelines that will provide regulatory guidance on the analysis and mitigation for Greenhouse Gas (GHG) emissions in CEQA documents. Under SB 97, these amendments are to be adopted on or before January 1, 2010. In the interim, OPR has prepared a technical guidance document regarding the steps lead agencies should take to address climate change in their CEQA documents.¹²⁶ The following discussion of the project's contribution to cumulative emissions of greenhouse gases considers this interim guidance and the City's developing approach on climate change analysis, based upon the best available information.

For the purposes of this EIR, a global climate change impact is considered significant if the project would:

- Result in substantial new greenhouse gas emissions; or
- Be adversely impacted by sea level rise of 55 inches (which is about 4.5 feet).

At this time, for a project to be a substantial source of new greenhouse gas emissions it would have to meet the following criteria:

- Result in a net increase in greenhouse gas emissions, in terms of carbon dioxide equivalents, that could substantially impede local, regional, or statewide efforts to reduce overall greenhouse gas emissions to 1990 levels; or
- Is inconsistent with carbon dioxide reduction strategies contained in the 2006 Final Report by the California Climate Action Team.

The following discussion is based on analysis completed by *SCS Engineers* in June 2008 (refer to Appendix C).

¹²⁶ Governor's Office of Planning and Research. Technical Advisory: CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act Review. 19 June 2008.

6.5.3 Discussion of Impacts and Conclusions

6.5.3.1 *Impacts from the Project (Changes in Emissions of Greenhouse Gases)*

Project's Consistency with the 2008 ARB Climate Change Scoping Plan

As discussed previously, in 2008 the ARB approved the *Climate Change Scoping Plan*. The *Scoping Plan* proposes a comprehensive set of actions designed to reduce overall carbon emissions in California. The *Scoping Plan* identifies the state's strategy and recommended actions to achieve the 2020 greenhouse gas emissions limit required by AB 32. The project would be consistent with the *Scoping Plan's* recommended actions for recycling and waste facilities for reducing landfill methane. The landfill manages landfill gas through its GRS facility where the gas is converted to electricity and backup landfill gas destruction flares. Landfill gas is also exported to the WPCP where it generates electricity for use in wastewater treatment operations. In addition, the project would be subject to the EAM proposed by CARB, which will be effective in 2012. The EAM would require additional and enhanced surface emissions monitoring (SEM) at the project site, but is unlikely to require the expansion of the existing gas collection and control system since the BAAQMD landfill gas control requirements under Rule 8-34, which the project complies with, are stringent.

The *Scoping Plan* also recommends high recycling and zero waste. The Recyclery will continue to operate as a materials recovery (or recycling) facility on the existing parcel separate from the landfill. As markets, market demands, recycling programs, and recycling technologies change over time, it is likely that the materials handled by the Recyclery, the materials recovered, and the technologies used to process them will change accordingly. These future conditions cannot be foreseen at this time and may require subsequent CEQA analysis. Wood waste and green waste will continue to be processed and/or managed on the landfill site. In addition, the project proposes to include preliminary processing of food waste at the Recyclery. The City, as identified in the Green Vision, is working towards zero-waste.

Estimated Generated Greenhouse Gas Emissions

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, GHG emissions have a broader global impact. Landfills are sources of carbon dioxide and methane, which are GHGs.

AB 32 requires the CARB to prepare and maintain GHG inventories. Landfills are included in the CARB inventories, and account for 1.2 percent of California GHG emissions for 2004 (the most recent inventory). More information about the CARB inventories and assumptions are provided in Appendix C.

According to the Solid Waste Industry for Climate Solutions (SWICS), the values assumed by CARB for the percent of landfill gas collected, percent of methane passing through the landfill cover that is oxidized, and percent of methane sent to flares and other control devices are conservative and out of date. SWIS has developed collection efficiency, methane oxidation, and methane destruction rates based on recent research. These rates account for the landfill cover type, results of surface emissions monitoring, and the liner type at the landfill. Both the CARB default values and SWICS site specific values are shown in Table 6.5-1 below.

Table 6.5-1: CARB and SWICS Values Used to Calculate GHG Emissions				
	Collection Efficiency	Methane Oxidation in Landfill Cover	Methane Destruction Efficiency in Flare	Methane Destruction Efficiency in Engines
	(in percentages)			
CARB Default Value	75	10	98	98
SWICS Calculated Value	93.88	35.00	99.96	98.34

It is assumed that some of the best management practices (BMPs) from the California Integrated Waste Management Board's *Technologies and Management Practices for Reducing Greenhouse Gas Emissions from Landfills* (2008) will be implemented as the landfill expands. The project does not currently propose any specific practices, which must be individually evaluated for each site for appropriateness and effectiveness. The greenhouse gas emissions calculated do not assume any benefit from the possible future implementation of BMPs.

Landfills are also a place where carbon is stored, removing it from the carbon cycle and preventing its emission as carbon dioxide. When waste is placed in a landfill, not all of the carbon decomposes into methane and carbon dioxide. The carbon that does not decompose is sequestered in the landfill. Sequestered carbon is not emitted to the atmosphere as either carbon dioxide or methane, removing it from the carbon cycle resulting in reduced greenhouse gases. The inclusion of carbon storage in a landfill greenhouse gas calculation is not universally accepted, but it is consistent with USEPA methodologies and inventories. Carbon storage is recognized by the USEPA, IPCC, and CARB.

Carbon dioxide emissions from landfills and the combustion of landfill gas are considered to be biogenic. Methane emissions are considered to be anthropogenic because they are caused by the artificially anaerobic conditions in the landfill. Though most GHG inventories do not include biogenic emissions or put them in a separate category from anthropogenic emissions, the GHG estimates in this EIR analysis include the biogenic carbon dioxide emissions in the inventory.

The GHG emissions under existing conditions were calculated based on the emissions and storage from 1932, the year Newby Island Landfill opened, through 2050, the year of state commitments for GHG reductions. Under existing and immediate closure conditions, it is assumed that no waste is placed in the landfill after 2007.¹²⁷ Under permitted conditions, it is assumed that waste would continue to be accepted at the landfill at current rates until 2016, when the landfill would reach its current permitted capacity. It is assumed that after 2016, waste that would normally be accepted at NISL would be diverted to another landfill.

It is likely that the contracted waste would be hauled to Forward Landfill, which is located in Manteca, California, approximately 147 miles from NISL. This diversion increases the hauling distance and associated GHG emissions from haul vehicles. The amount of waste that would be placed in an alternate landfill each year was provided by Allied Waste. The approximate tonnage and increased gasoline and diesel use by the fleets for traveling to an alternative landfill to NISL from 2010 to 2025 is identified in Appendix C. The emissions are calculated based on an increased hauling distance of 147 miles to Forward Landfill. The estimated total increase in carbon dioxide

¹²⁷ Under Immediate Closure conditions, the landfill was assumed to close in 2007 because the most recent data at the time the analysis was completed was 2007 data.

emissions from hauling to Forward Landfill from 2010 to 2025 is 5.9×10^5 million metric tons of carbon dioxide equivalent. This increase is included under existing/immediate closure and permitted conditions. Emissions from hauling waste to Forward Landfill are not included under project conditions because under project conditions additional capacity would be available at NISL. While the use of a solid waste transfer facility on the Recyclery is analyzed in this EIR to the extent feasible, specific details regarding a solid waste transfer facility (size, operation, location of where materials would be transferred to) is unknown at this time. Therefore, under the proposed project, a PD Permit and additional environmental review will be required when sufficient details regarding the solid waste transfer facility are known to confirm there would be no new or substantially more severe impacts. If the proposed project is not approved and a solid waste transfer facility is required, a rezoning and additional CEQA review will be required for the above mentioned reason. (See also discussion in Section 8.5.1, the No Project Alternative.) Additional information about the calculation of existing, permitted, and project emissions, including data assumptions, is included in Appendix C.

The year 2050 was chosen as the final year of the inventory (under existing, permitted, and project conditions) based on the GHG reduction goals set in EO S-3-05. This allows a long enough period after closure of the landfill to show emissions of GHG after the landfill closure when no additional sequestration is occurring since waste disposal has ceased. The GHG calculations assume the same collection and destruction rates over the years considered.

Table 6.5-2 shows total GHG emissions from the landfill under existing/immediate closure, permitted, and project conditions. The methane emission is anthropogenic and is considered a GHG emission from the landfill. The carbon dioxide emission is biogenic, but is also considered an emission from the landfill. The energy displacement credit is a credit for the landfill. The carbon sequestration is also a credit for the landfill. The total GHG emissions from NISL are the sum of the methane and carbon dioxide emissions minus the power displacement and carbon sequestration credits. Negative totals indicate that more GHG is displaced and carbon is stored in the landfill than is emitted. GHG reductions from composting are not included. Not including the GHG reductions for composting is a conservative measure because composting results in fewer GHG emissions.

The amount of carbon sequestered is greater than the GHG emissions from the landfill. When carbon storage is included in the GHG total for the project, the project lowers the GHG emission of NISL because more carbon is sequestered in the landfill where it would not be emitted as either methane or carbon dioxide. As shown in Table 6.5-2, the project would not result in an increase in GHG emissions. In fact, the project would result in a greater amount of carbon being sequestered.

The amount of soil required to raise the portions of the levee by one foot could be placed on top and inboard of the perimeter berm without any encroachment into adjacent waterways. As a result, no lateral (outward) expansion of the perimeter levee footprint is required and no impacts to the adjacent waterways would occur.

Impact C-GCC: The project would result in a greater amount of carbon being sequestered at the landfill than would be the case without the project. This benefit more than offsets the increased amount of greenhouse gases emitted into the atmosphere. For this reason, the project would not result in an increase of new greenhouse gas emissions. **(Less Than Significant Impact)**

Table 6.5-2: Greenhouse Gas Emissions from NISL 1932-2050						
	Methane Emissions	Carbon Dioxide Emissions	Energy Displacement Credit*	Carbon Storage Credit	Net Greenhouse Gas Emissions	Difference from Project Conditions
	(in million metric tons carbon dioxide equivalent)					
SWICS Methodology						
Existing/ Immediate Closure Conditions	1.6 x 10 ⁶	6.0 x 10 ⁶	9.2 x 10 ⁵	1.6 x 10 ⁷	-9.3 x 10 ⁶	8.4 x 10 ⁶
Permitted Conditions	2.1 x 10 ⁶	7.8 x 10 ⁶	1.2 x 10 ⁶	2.2 x 10 ⁷	-1.4 x 10 ⁷	4.1 x 10 ⁶
Project Conditions	2.4 x 10 ⁶	9.1 x 10 ⁶	1.4 x 10 ⁶	2.8 x 10 ⁷	-1.8 x 10 ⁷	---
CARB Methodology						
Existing/ Immediate Closure Conditions	8.1 x 10 ⁶	6.6 x 10 ⁶	9.2 x 10 ⁵	1.6 x 10 ⁷	-2.2 x 10 ⁶	4.6 x 10 ⁵
Permitted Conditions	1.1 x 10 ⁷	8.5 x 10 ⁶	1.2 x 10 ⁶	2.2 x 10 ⁷	-4.3 x 10 ⁶	2.5 x 10 ⁶
Project Conditions	1.2 x 10 ⁷	1.0 x 10 ⁷	1.4 x 10 ⁶	2.8 x 10 ⁷	-6.8 x 10 ⁶	---
Note: * GHG emission reductions were calculated for energy displaced based on the California Climate Action Registry (CCAR) methodology. It is assumed that energy generated from the landfill gas displaces energy that would have been produced elsewhere in California (see Appendix C).						

6.5.3.1 Impacts to the Project (Changes in Sea Level)

As discussed in **Section 3.8 Hydrology and Water Quality**, the project site is located within an area that was once tidal marshlands that drained into San Francisco Bay. The site is adjacent to Coyote Creek, which curves along the eastern perimeter of the site. The project site is located in a 100-year flood zone, with a predicted 100-year flood elevation of nine feet (NGVD29).

The project site is also located within an area of potential tidal flooding. The level of tidal flooding in the Alviso area is nine feet (NGVD29).¹²⁸

NISL and the Recyclery are protected from exterior floodwater inundation, run-on, and tidal waters by a perimeter levee system. The perimeter levee, the top of which is approximately 14 feet (NGVD29) adjacent to Coyote Creek, protects NISL and the Recyclery from the 100-year flood with a design flood stage of nine feet (NGVD29) and from tidal influences. In other areas, the perimeter levee varies between 12.5 feet and 22.5 feet (NGVD29).

¹²⁸ City of San José. Alviso Master Plan Final Environmental Impact Report. November 1998.

According to the San Francisco Bay Conservation and Development Commission (BCDC), the sea level is expected to rise by one meter (about three feet) by the year 2100, which is consistent with the projections in the 2006 California Climate Action Team Report. Based on the sea level rise map prepared by the BCDC, the sea level rise is expected to impact the southwestern portion of the landfill.¹²⁹ According to a draft report by the Pacific Institute (March 2009), sea level on the California Coast is estimated to rise by 55 inches (about 4.6 feet) by 2100.¹³⁰ In the event of sea-level rise (4.6 feet) and a 100-year flood (nine feet) at the project site, the sea level would rise a total of 13.6 feet. The perimeter levee would be able to protect the site from sea level rise and 100-year flood by adding compacted soil to the top of the existing levee in areas where it is currently lower than 14 feet (NGVD29). In almost all cases, less than one foot of additional soil placed on top of existing levees would be sufficient to protect the site from a 13.6 foot sea-level and flood event.¹³¹

Analysis completed by GLA on the effect of sea-level rise at NISL and the Recyclery found that the predicted increase in sea-level would have negligible impacts on the slope stability of the landfill (see Appendix E). This analysis assumed that the existing perimeter levee would be raised accordingly to accommodate the sea level rise. In order to preclude any possible increased sea water intrusion into the waste mass, the raised levee would incorporate low-permeability clay and synthetic liner materials. Based on the above discussion, the project site would be adversely impacted by the projected sea level rise in conjunction with a 100-year flood event, which would result in a sea-level rise of 13.6 feet.

Impact C-GCC: The project would be adversely impacted by the projected sea level rise and 100-year flood event of 13.6 feet. **(Significant Impact)**

As a condition of approval, the project proponent proposes to implement the following mitigation measure to reduce impacts from sea-level rise to a less than significant level:

MM C-GCC – 1.1: As part of the landfill’s annual capacity survey report, the landfill operator shall also evaluate the status of sea level rise to ensure that the perimeter levee is at least 11 feet above sea level. If the sea-level were to rise to 3.6 feet above mean sea level, the project proponent shall raise portions of the existing levee that are below 14 feet (NGVD29) by about one foot to ensure protection from the predicted sea-level rise of 4.6 feet and 100-year flood event of nine feet.

Conclusion: *The proposed project, with the implementation of MM C-GCC – 1.1 above, would not result in a significant impact from sea level rise and a 100-year flood event. (Less Than Significant Impact with Mitigation Incorporated)*

¹²⁹ San Francisco Bay Conservation and Development Commission. San Francisco Bay Scenarios for Sea Level Rise South Bay. Map. Available at: http://www.bcdc.ca.gov/media/planning/CCP_SouthBay.jpg.

¹³⁰ Pacific Institute. The Impacts of Sea-Level Rise on the California Coast. Draft Paper. March 2009.

¹³¹ Tjensvold, Eric. BAS Engineers. 22 May 2009.

6.6 NOISE

As discussed in Section 3.5 Noise, the project would not result in significant noise impacts. The following discussion evaluates whether the project, along with the cumulative projects, would result in significant cumulative noise impacts. All of the cumulative projects, except for the Creekside Landing Shopping Center, are not located in proximity to NISL and the Recyclery and therefore, would not contribute to a cumulative noise impact with the proposed project. The primary cumulative noise issue is construction noise impacts from the proposed project and the planned Creekside Landing Shopping Center.

6.6.1 Thresholds of Significance

This analysis examines whether development of the proposed project and the planned Creekside Landing Shopping Center (which is located about 600 feet east of the project site at its nearest point) would result in a significant cumulative construction-related noise impact.

6.6.2 Discussion of Impact and Conclusion

The nearest land use to the project site is the planned commercial use on the Creekside Landing property located about 600 feet east of the project site at its nearest point. Construction noise at the project site would be between 70 and 64 dBA at the planned commercial buildings on the Creekside Landing property. The construction noise at the project site would be similar to the existing and future ambient noise levels at the Creekside Landing property.¹³² For these reasons, construction on the project site would not result in significant contribution to a cumulative construction noise impact.

¹³² City of Fremont. Final EIR for the Creekside Landing Project. SCH#2008042116. December 2009.

The project would not result in significant and unavoidable impacts.

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives which “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” The purpose of this section is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives “impede to some degree the attainment of the project objectives” or are more expensive (§15126.6).

In order to comply with the purposes of CEQA, it is important to identify alternatives that reduce the significant impacts which are anticipated to occur if the project is implemented, but to try to meet as many of the project’s objectives as possible. The Guidelines emphasize a common sense approach – the alternatives should be reasonable, “foster informed decision making and public participation,” and focus on alternatives that avoid or substantially lessen the significant impacts. The range of alternatives selected for analysis is governed by the “rule of reason” which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice.

The three critical factors to consider in selecting and evaluating alternatives are, therefore: 1) the significant impacts from the proposed project which could be reduced or avoided by an alternative, 2) the project’s objectives, and 3) the feasibility of the alternatives available. Each of these factors is discussed below.

8.1 SIGNIFICANT IMPACTS OF THE PROJECT

As mentioned above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to alternatives that would avoid or substantially lessen any of the significant effects of the project and would achieve most of the project objectives. Alternatives may also be considered if they would further reduce impacts that are already less than significant because the project is proposing mitigation. This EIR does not identify any significant unavoidable impacts from the proposed project. Impacts that would be significant, but for which the project includes mitigation to reduce the impacts to less than significant levels include impacts to air quality from NO_x and VOC/POC/ROG emissions; burrowing owls and their burrows (if present on the site), sensitive wildlife from nuisance species at the landfill and Recyclery, California clapper rails, salt marsh harvest mice, and salt marsh wandering shrews from landfill operations past 2025; geology and soils from buried waste at the site; and impacts from sea-level rise from global climate change.

CEQA encourages consideration of an alternative site when impacts of the project might be avoided or substantially lessened. Only locations that would avoid or substantially lessen any of the impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR.

8.2 OBJECTIVES OF THE PROJECT

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. The purpose of the project is to optimize the design of the landfill on the project site by increasing the allowable top elevation of the landfill from 150 feet to 245 feet (NGVD29), resulting in a 15.12 million cubic yard capacity increase. The proposed height of 245 feet (NGVD29) would allow the landfill to continue receiving waste at the existing rate until, at least, the estimated closure date of 2025. At the same time, the current legal non-conforming land uses and zoning of the landfill site would be made consistent with the General Plan designations and the zoning for the Recyclery modified to conform to current and anticipated future uses.

The primary objectives of the project proponent are to:

- A. Optimize use of the permitted footprint of the landfill for disposal capacity;
- B. Increase the height of the landfill to increase its disposal capacity to allow the landfill to continue to accept historic waste volumes from the region. No change is proposed to the landfill's estimated closure date (identified as 2025 in the landfill's *Preliminary Closure and Post-Closure Maintenance Plan*, July 2006) or the landfill's Solid Waste Facility Permit (Permit No. 43-AN-0003, March 1997);
- C. Enable the project site to continue to provide nearby waste disposal and recycling solutions for the City of San José and surrounding municipalities, thereby avoiding the environmental impacts that would be associated with trucking solid waste to more distant facilities;
- D. Create a comprehensive zoning district that recognizes and allows for the existing landfill, recycling, and waste diversion activities with flexibility to allow for future technologies/innovations to be used on the site;¹³³ and
- E. Produce additional landfill gas for use as a renewable energy source for power generation by the on-site power plant.

8.3 FEASIBILITY OF ALTERNATIVES

CEQA, the CEQA Guidelines, and the case law on the subject have found that feasibility can be based on a wide range of factors and influences. The Guidelines advise that such factors *can* include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can “reasonably acquire, control or otherwise have access to the alternative site [§15126.6(f)(1)].”

¹³³ Future technologies and innovations to be used on the site would be technologies and innovations in equipment and processes related to landfilling, recycling, composting, and energy recovery.

8.4 SELECTION OF ALTERNATIVES

Alternatives Considered But Rejected

The single most controversial impact from the existing landfill operation is the subsidy of predatory and nuisance species by food waste landfilled on the property. In particular, large numbers of gulls are attracted to the site. The gulls cause unacceptable impacts to the adjacent Refuge and the species that live there. Suggestions made for modifying the landfill include requiring the landfill to (a) accept less food waste, (b) not accept food waste during certain periods of the year, and/or (c) do something else with the food waste.

The landfill's permits and contracts with various government agencies require that it accept MSW or municipal solid waste, which includes food waste. There are laws and regulations throughout the state that food waste be collected at certain minimum frequencies in order to protect public health. Those regulations were based on the assumption that local governments would ensure that there was a safe and appropriate place for the food waste to go, and for many years that has been a sanitary landfill. Consistent with these assumptions and expectations, Newby Island has been accepting food waste for disposal for almost 80 years.

There is at this time no alternative system in place that could accept and process all of the food waste presently landfilled at Newby Island. Several cities in Santa Clara County are preparing or expanding "Zero Waste" plans that include alternatives to landfill disposal for organics, including composting and methods for digestion and generation of energy. Some of the ideas, such as biogas facilities and new or expanded compost operations, are in development. At this time there is neither sufficient capacity to process the material taken to Newby Island, nor is there even sufficient capacity known to the City of San José to be in a preliminary design stage that would replace Newby Island.

Since some of the new biogas technology is not fully proven, especially for high volume facilities, there is also no viable alternative method that can be discussed in a meaningful way other than composting.

The permitted composting capacity of Newby Island is fully utilized under existing conditions. As the demand increases, the landfill operator may explore expanding that capacity, which would require preparation of subsequent CEQA analysis since it is not addressed in this EIR. There is only one other facility that composts food waste in Santa Clara County, Z-Best, which is on the County's southern border and is believed to be near capacity. There is no known facility in Alameda County or San Mateo County. There is, therefore, no feasible existing method for diverting a substantial quantity of food waste from NISL.

To substantially reduce food waste burial at the Newby Island landfill would require a food waste composting operation in the near future. How much capacity could be created, what type of composting system would be utilized to minimize greenhouse gas and odor impacts, where a much expanded composting operation would be located on this site or elsewhere, and what the impacts would be from such an operation, are all unknown at this time. Processing food waste for composting, as discussed elsewhere in this EIR, also attracts nuisance species. The near term mitigation for that is to require an enclosure (a building or tent). Substantially increasing the quantity of food waste being composted on Newby Island may require a larger and/or more efficient processing system than what is currently proposed, and could require a completely different approach to preclude increasing the problems of nuisance species in the composting area.

It is reasonable to foresee that alternative processes for managing organic waste, using both new and old technologies, will be widely implemented in the near future. Some of those processes may be located at Newby Island, and will be considered by the City of San José through PD zoning and/or PD Permits and appropriate CEQA review.

There is no known technically viable and environmentally superior alternative presently available for immediately handling the quantities of organic waste currently buried at Newby Island. This alternative is not discussed further in this EIR.

Alternative Locations

In order to identify an alternative location for the proposed project that might reasonably be assumed to result in fewer and/or less significant impacts than the proposed project, consideration was given to other landfills in the County, including possible expansion of those landfills; to other landfills already owned by Allied Waste to which Allied could then direct the contracted waste; and to other as-yet-undeveloped landfill locations in Santa Clara County.

Alternative Location in Santa Clara County: There is no alternative location that meets all of the project objectives (Section 8.2) and could be found to be both feasible and environmentally superior. There are four operating privately owned landfills in Santa Clara County, all in San José. The remaining publicly owned landfills accept waste only from within their respective owner-cities and neither are in San José. Two landfills that accept waste from multiple jurisdictions are owned by Waste Management, Inc. and are discussed briefly here.

Kirby Canyon is a major landfill in the foothills in the southeast quadrant of San José. There is extensive open land adjacent to the existing landfill, since the site is outside the City's Urban Growth Boundary and Urban Service Area. The landfill is within an area of serpentine soils and both the landfill property and adjacent lands are known to be habitat for special status species (including Bay Checkerspot Butterfly and Mount Hamilton Thistle, among others). Although there are no active faults believed to be on the landfill site, there are faults and fault traces both upslope and downslope. Because the landfill property is elevated well above the valley floor, it is also visible for some distance in both San José and Morgan Hill. [Source: City of San José. Kirby Canyon Sanitary Landfill Environmental Impact Report. 1983].

Another operating landfill in San José is Guadalupe Mines, which is on Guadalupe Mines Road in south San José, immediately adjacent to residential areas in Los Gatos. The primary access road to the landfill runs through residential neighborhoods. Due to the proximity of existing development, there is little possibility that the Guadalupe Mines landfill could be expanded beyond its currently permitted boundaries.

Both Kirby Canyon and Guadalupe Mines are farther from most of the areas served by Newby Island than is Newby Island (see Table 3.12-1 in the Draft EIR), which means that additional fuel and time would be necessary to transport waste, and additional air pollution would be generated.

Alternative Locations Owned by Allied Waste: Other proximate landfills owned by Allied Waste include Ox Mountain in San Mateo County and Forward Landfill outside Stockton. Both landfills are outside Santa Clara County, Forward Landfill is approximately 80 miles northeast of Newby Island and Ox Mountain is approximately 39 miles northwest of Newby Island. The air quality impacts and energy consumption involved in transporting only the contracted volumes of MSW to

these locations would be substantially greater than the impacts of transporting the same quantities of waste to either Newby Island or another landfill in Santa Clara County (see Table 3.0-1 “Contractually Committed Quantities of MSW” in the Draft EIR).

Alternative Locations That Could be Developed: There are three “Candidate Solid Waste Sites” identified on the City of San José’s General Plan Land Use/Transportation Diagram. All three sites are in the foothills south and east of San José, but north of Kirby Canyon. This area contains numerous faults and fault traces, landslides and steep slopes. There are also extensive areas of oak woodland, serpentine grassland, and other habitat occupied by various special status species. The three Candidate Solid Waste sites are on land currently designated *Non-Urban Hillside*, *Public Park and Open Space*, and *Private Open Space*, and are outside the City’s Urban Service Area and Urban Growth Boundary. There are no public roads that access the properties, and it is not known whether there are any services available. Without access, permits, or specific information on the degree of environmental sensitivity, it is not possible to determine whether the sites are viable for development with a landfill or to estimate how long it might require to permit and develop a landfill at any of the sites. Given the presence of various special status species (*e.g.*, Mount Hamilton Thistle, California Tiger Salamander) and sensitive habitats (*e.g.*, oak woodland) throughout these foothills, and the geological instability and steep slopes in the area, developing new landfills and the public road(s) required to provide access by garbage trucks would reasonably be assumed to result in more and greater significant environmental impacts than would the proposed expansion at Newby Island.

Alternatives Selected

In addition to “No Project,” the Guidelines advise that the range of alternatives discussed in the EIR should be limited to those that “would avoid or substantially lessen any of the significant effects of the project,” or in the case of the proposed project, would further reduce impacts that are considered less than significant with the incorporation of identified mitigation [§15126.6(f)]. The discussion below addresses alternatives which could reduce project impacts. ~~The alternatives analyzed are the No Project Alternative, Location Alternative, and a Reduced Gull Access to Food Alternative.~~ Given the factors discussed above, the following evaluation of possible alternatives to the project as it is proposed includes (1) a No Project Alternative as required by CEQA; (2) the alternative of expanding Kirby Canyon instead of Newby Island; and (3) alternative mitigation focused on the problems associated with gulls.

The components of these alternatives are described below, followed by a discussion of their impacts and how they would differ from those of the proposed project. A summary of the environmental impacts of the proposed project and the project alternatives discussed below is provided in Table 8.0-1 at the end of this section.

8.5 PROJECT ALTERNATIVES

8.5.1 No Project Alternative

The CEQA Guidelines advise that “No Project” conditions are not a baseline for determining the significance of the project’s impacts; the purpose for having this section is to “allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project” [§15126.6(e)(1)]. The No Project analysis should discuss the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to

occur in the foreseeable future if the project were not approved, “based on current plans and consistent with available infrastructure and community services” [§15126.6(e)(2)]. The Guidelines state that the discussion will usually proceed along one of two lines, depending on whether the project is a “plan, policy or ongoing operation,” or if it is something else such as a development project on identifiable property.

Newby Island Sanitary Landfill and the Recyclery is fully permitted by the CIWMB to operate as (1) a sanitary landfill taking in up to 4,000 tons per day of solid waste for disposal; (2) a materials recovery facility and recycling transfer station taking in up to 1,600 tons per day; and (3) a composting facility permitted for 980 tons per day of source separated green waste and food waste.

If the proposed rezoning project is not approved, the sanitary landfill will continue to accept MSW in tonnages consistent with its current SWFP and recent operations. As its current permitted capacity is approached, the landfill may accept less and less waste in order to service its existing contracts at this landfill. Alternatively, the landfill operator could choose to close the landfill early and haul contracted waste to a more distant landfill. At this time, the landfill operator has indicated that their plan is to reduce incoming tonnages in order to allow contracted waste to be placed at Newby Island for the length of the existing contracts (2023). Recycling activities on the landfill site are tied to the landfill operation as part of its legal nonconforming status. Parts of the landfill are used for the office and storage uses which are not allowed by existing zoning or City permits and would have to be removed.

The D-shaped area is designated for *Light Industrial* uses in the City’s General Plan and therefore the currently unpermitted uses would need to be discontinued, or a separate zoning and new permits would need to be obtained to allow industrial uses that are compatible with the NISL, WPCP, and the Recyclery consistent with the City’s General Plan.

The current uses of the Recyclery which are not consistent with the existing PD Zoning including outdoor processing of food waste, would be discontinued under the No Project Alternative. The Recyclery can continue to operate after the landfill closes.

8.5.1.1 *Comparison of Environmental Impacts*

Assuming that the project is not approved and the landfill restricts its incoming wastes to contractual wastes only, people with non-contractual waste would need to find alternative landfills to dispose of their waste. Alternative landfills could be Kirby Canyon Landfill, Guadalupe Sanitary Landfill, or other landfills outside of the County. As discussed in **Section 3.12 Energy**, it is generally most efficient for local non-contractual waste to be delivered to NISL. Another scenario is that without the extension of capacity allowed by the proposed project, the landfill continues receiving wastes at current levels until capacity is reached (which is estimated to be in 2016) and waste (contractual and non-contractual) from San José, Milpitas, Santa Clara and other cities will need to be hauled greater distances to be landfilled. Allied has indicated they would use Forward Landfill in Manteca. Non-contractual waste would likely be directed to closer landfills by the generators. This will use more energy and will generate more air pollution. The increased costs of transporting waste greater distances might encourage more waste diversion, which would be a positive impact. In addition, the City of San José would need to approve land use permits for modifications to the landfill, D-shaped area, or the Recyclery to allow transfer of waste from collection vehicles to transfer trucks in order to deliver the waste to Forward Landfill. As long as there is waste being generated, however, it will have to be landfilled somewhere. Once Newby Island closes, the County’s landfill capacity will be

substantially diminished. While the use of a solid waste transfer facility on the Recyclery is analyzed in this EIR to the extent feasible, specific details regarding a solid waste transfer facility (size, operation, location of where materials would be transferred to) are unknown at this time. Therefore, under the proposed project, a PD Permit and additional environmental review will be required when sufficient details regarding the solid waste transfer facility are known to confirm there would be no new or substantially more severe impacts. If the proposed project is not approved and a solid waste transfer facility is required, additional rezoning, development permits, and CEQA review will, therefore, be required.

The County or one of the cities in the County may choose to locate and permit a new landfill somewhere in Santa Clara County. Without knowing where that might occur, it is nevertheless likely that opening a new landfill at an outlying location will have some new adverse environmental impacts. New Baylands landfills are contrary to City and Regional Board policies. Previous candidate landfill sites identified in San José's General Plan were located in the foothills east and south of San José. Those locations would all require longer travel distances from the waste generators in the urban areas of Santa Clara County than is required to use Newby Island. In addition to site specific impacts, a new landfill may also involve increased travel distances and more air pollution.

Newby Island Sanitary Landfill is anticipated to close within the next 16 years. The impact of not having a landfill at this location will occur, therefore, at some point in time. Recycling and other forms of waste diversion have increased dramatically since AB939 was passed in 1989, and it is likely that the quantity of waste needing to be landfilled will continue to be reduced in the future. It is also possible that most of the waste generated in the County can be managed by means other than landfill burial by 2025, when the landfill at Newby Island is due to close completely. That outcome is still speculative, however. No change to the post-closure use of the main body of the landfill is proposed by this project.

The No Project Alternative would result in lesser shade and shadow impacts, as well as visual and aesthetic impacts because the existing permitted height is less than the proposed height. The No Project Alternative would result in similar impacts to trails as the proposed project. As discussed previously, since the City has no direct control over the closure date of the landfill, the approval of the proposed project could allow the landfill to operate past the estimated closure date of 2025 as long as there is capacity at the landfill. For this reason, the No Project Alternative could result in earlier completion of the San Francisco Bay Trail loop around the landfill in comparison to the proposed project. This Alternative would also result in similar land use compatibility, transportation, noise, geology and soils, hydrology and water quality, hazards and hazardous materials, cultural resources, utilities and service systems, and growth inducing impacts as the proposed project.

As discussed above, the No Project Alternative would likely result in greater air quality and energy impacts with the need to transport waste to more distant locations once NISL reaches capacity. The No Project Alternative could result in greater impacts to biological resources because the regular enforcement and monitoring of substantially more aggressive abatement measures would not necessarily be required, as they would be under the proposed project with the Nuisance Species Abatement Plan (NSAP) discussed in **Section 3.6 Biological Resources**. If, under the No Project Alternative, the waste stream is reduced, it is not clear whether the reduced waste stream would result in any reduction in the working face size. As discussed in the Reduced Working Face Alternative below, a smaller working face with less exposed garbage could reduce the number of gulls foraging at the site.

8.5.1.2 *Relationship to Project Objectives*

This alternative would not be consistent with any of the project objectives.

8.5.1.3 *Conclusion*

The No Project Alternative would result in lesser shade and shadow impacts, as well as visual and aesthetic impacts because the existing permitted height is less than the proposed height. This Alternative would also result in similar land use (impacts to trails and land use compatibility), transportation, noise, geology and soils, hydrology and water quality, hazards and hazardous materials, cultural resources, utilities and service systems, and growth inducing impacts as the proposed project.

As discussed above, the No Project Alternative would likely result in greater air quality and energy (fuel) impacts with the need to transport waste to more distant locations sooner once NISL reaches capacity. The No Project Alternative could result in greater impacts to biological resources because the more aggressive enforcement and monitoring of abatement measures would not necessarily be required, as they would be under the proposed project with the NSAP discussed in **Section 3.6 Biological Resources**.

The No Project Alternative would not meet any of the project objectives.

8.5.2 Location Alternative

The Location Alternative consists of expanding the capacity of Kirby Canyon Landfill by 15.12 million cubic yards (*i.e.*, the same amount proposed for NISL). It is assumed under this Location Alternative that Kirby Canyon Landfill, like Newby Island under the proposed project, would be expanded vertically and not horizontally. Kirby Canyon Landfill is an existing landfill located at 910 Coyote Creek Golf Drive in San José that is owned by Waste Management (not Allied Waste). Under the Location Alternative, if the proposed project is not approved and NISL continues to take in waste at current levels (and the landfill would likely reach capacity in 2016), waste (non-contractual) that would otherwise have been delivered to NISL could be delivered to Kirby Canyon Landfill. There is capacity remaining at Kirby Canyon Landfill. The original EIR for Kirby Canyon assumed that waste from the City of San José would be disposed there, so it is anticipated that no new significant impacts would occur under the landfill's existing capacity. If this Alternative were to be approved instead of the project, additional rezoning and environmental review would be required to analyze the impacts of expanding Kirby Canyon Landfill if the current capacity is inadequate. Under the Location Alternative, if the proposed project was not approved and NISL reduced incoming waste to just contractual waste, the non-contractual waste that would typically be delivered to NISL could be delivered to Kirby Canyon Landfill. Note that Allied Waste does not own or have control of Kirby Canyon Landfill, therefore, the feasibility of implementing this Alternative is low.

8.5.2.1 *Comparison of Environmental Impacts*

Under the Location Alternative, rather than the expansion of Newby Island Landfill, Kirby Canyon Landfill (which is also an existing landfill) would be expanded. The Location Alternative would avoid the project's impacts to biological resources discussed in **Section 3.6 Biological Resources**, especially those from gulls because it is not located on the Bay. Because Kirby Canyon Landfill is not proximate to large colonies of endangered birds, the secondary effects of gull predation would be

much less, and there is less possibility of cumulative gull impacts from other landfills. However, Kirby Canyon is located in serpentine habitat, which is known to contain endangered species. Expansion of Kirby Canyon Landfill is likely to result in significant impacts to those species (bay checkerspot butterfly, Metcalf canyon jewel flower, Mt. Hamilton thistle, and others).

A height expansion at Kirby Canyon would result in similar land use effects in terms of increase in shade and shadow and land use compatibility. Kirby Canyon Landfill is not, however, located near a Refuge or the San Francisco Bay Trail, however, it is near Juan Bautista de Anza National Historic Trail, Bay Area Ridge Trail, and Coyote Creek/Llagas Creek Trail. The expansion of Kirby Canyon Landfill would not significantly impact these trails. The Kirby Canyon EIR identified visual impacts to parts of Morgan Hill and Coyote Valley, although they were not considered significant. A higher landfill might result in new significant impacts. The Location Alternative would have similar visual and aesthetic, air quality, geology and soils, hydrology and water quality, hazards and hazardous materials, cultural resources, utilities and service systems, and energy impacts as the project.

While the Location Alternative would not increase traffic, it would change the flow of traffic from NISL to Kirby Canyon Landfill. As a result, the haul vehicle noise would increase at Kirby Canyon Landfill but it is not anticipated that it would result in significant traffic impacts or noise impacts given that Kirby Canyon Landfill is not located adjacent to sensitive receptors (*i.e.*, residences).

8.5.2.2 *Relationship to Project Objectives*

This Alternative would meet project objective C by providing a nearby waste disposal and recycling services for the City of San José and surrounding municipalities. While Kirby Canyon Landfill does not have an existing on-site power plant, it does have a methane recovery system and a power plant could be installed and then this Alternative could meet project objective E of capturing landfill gas for use as a renewable energy source for power generation. This Alternative would not meet project objectives A (optimizing use of the permitted footprint of NISL for disposal capacity), B (increasing the height of NISL to increase its disposal capacity to allow the landfill to continue to accept historic waste volumes), or D (creating a comprehensive zoning district that recognizes and allows for the existing landfill, recycling, and waste diversion activities).

8.5.2.3 *Conclusion*

The Location Alternative would avoid the project's impacts to biological resources and would have similar impacts to land use, visual and aesthetic, air quality, geology and soils, hydrology and water quality, hazards and hazardous materials, cultural resources, utilities and service systems, and energy. There would be different, but likely significant impacts to endangered species associated with serpentine soils. The Location Alternative would redirect traffic to Kirby Canyon, which would increase haul vehicle noise at Kirby Canyon Landfill; however it is not anticipated that the Location Alternative would result in significant traffic or noise impacts. As discussed above, Allied Waste does not own or have control of Kirby Canyon Landfill, therefore, the feasibility of implementing this Alternative is unlikely. This Alternative would meet project objective C and could meet project objective E. It would not meet project objectives A, B, or D.

8.5.3 Reduced Gull Access to Food Alternative

The more exposed waste, the more food is available to support more gulls (as well as other nuisance species). If the working face of the landfill could be substantially reduced and the outside food process area at the Recyclery was enclosed, the numbers of gulls foraging would also reduce accordingly. The Reduced Gull Access to Food Alternative would therefore substantially reduce the size of the existing working face to maintain or reduce the abundance of gulls (as well as other nuisance species) at the landfill to baseline conditions and enclose the currently outdoor food processing area west of the Recyclery building.

As discussed in **Section 3.6 Biological Resources**, the project would be required to implement a NSAP to reduce impacts from nuisance species to a less than significant level. The NSAP can be implemented via a variety of methods, including minimizing the working face of the landfill, trapping mammals, and using pyrotechnics. The NSAP does not require the implementation of specific abatement measures and is flexible in nature. It is possible that the nuisance species could adapt to the abatement measures such as trapping and pyrotechnics and those measures would lose their effectiveness. Unlike trapping and pyrotechnics, nuisance species can not “work around” or become desensitized to a reduced working face or a food waste enclosure. By requiring the working face be reduced, ~~instead of having it be an option in the NSAP~~, it ensures the number of foraging gulls will be reduced.

According to Allied Waste, the working face is the smallest size feasible and reducing the working face would not necessarily reduce the number of gulls at the landfill. Waste at the landfill can be either unloaded directly into the working face or unloaded in tipping areas adjacent to the working face then moved to the working face by bulldozers and then compacted. Therefore, the total foraging area for gulls includes both the working face and any tipping area that is created by the operators. The City Council will have to determine whether or not reducing the working face is a feasible alternative when making a decision on the project.

Currently, organics (including green waste, food waste, and wood waste) are processed (ground and mixed) outside on the paved area west of the Recyclery building. Nuisance species, including gulls, feed on this exposed organic waste. There are frequently gulls roosting on the roof of the Recyclery waiting to feed. This Alternative assumes the outside area at the Recyclery where the organics are processed is enclosed inside a building or structure (such as netting). By enclosing the outdoor processing area, the organics would not be exposed and would not attract as many gulls and other nuisance species as it currently does.

This Alternative could substantially reduce the abundance of gulls (as well as other nuisance species) at the landfill and Recyclery.

8.5.3.1 *Comparison of Environmental Impacts*

The Reduced Gull Access to Food Alternative would avoid the project’s significant impact related to the abundance of gulls at the working face of the landfill for the reasons discussed above and reduce the abundance of gulls at the Recyclery by completely enclosing the outdoor food processing area west of the building; however, according to Allied Waste, they would create a tipping area separate from the smaller working face and the gull impact would spread from the working face of the landfill to the tipping area.

The Reduced Gull Access to Food Alternative would result in similar land use, visual and aesthetic (since the building or structure constructed to enclose the processing area would likely be smaller or of similar size to the existing Recyclery building and shielded or blocked from views off-site by the existing Recyclery building), transportation, noise, hazards and hazardous materials, cultural resources, and utilities and service systems impacts as the project.

This Alternative could result in greater air quality, energy, water quality, and geology and soils impacts compared to the proposed project. A smaller working face means a smaller area for trucks to come in and dump their waste. Therefore, this Alternative could result in longer truck queues to dump waste at the landfill, (which would be why the landfill would use a separate tipping area) and could result in an incremental increase in air quality impacts since the trucks would have to idle for a longer period of time before being able to dump their load at the landfill. Longer queues might require that the landfill increase its current operating hours as well; which would not be an environmental issue. In addition to increased air quality impacts, this Alternative could also result in safety hazards. According to Allied Waste, reducing the working face would hinder a driver's ability to maintain safety protocols regarding separation distances between haul vehicles. Trucks may queue closer to each other and result in greater safety hazards to workers and collection vehicle drivers in the event vehicles roll over while tipping.

Allied Waste also stated that the landfill might need to reduce the amount of incoming waste to maintain a smaller working face. Non-contractual waste could be delivered to alternative landfills, which could increase fuel consumption and air pollution (depending on the location of the alternative landfill). This would reduce the landfill's ability to serve the public.

According to Allied Waste, substantially reducing the size of the working face could reduce the landfill operator's ability to properly place and compact the waste. To compact waste disposed of at the landfill, standard industry practice requires the use of one or more bulldozers to move and spread the waste and heavy compactor vehicles to compact the waste. The safe use of this equipment requires both time and space in order to properly process waste received at the landfill's working face. According to Allied Waste, restricting the landfill's working face would result in a reduced ability to properly place and compact waste during the operating day which could cause voids or gaps in the landfill mass. Voids or gaps in the landfill mass could create pathways for landfill gas to escape and leachate to seep to the surface. Therefore, this Alternative could result in greater air quality and surface water quality impacts than the proposed project. The voids and gaps could also affect the stability of the landfill and compromise the environmental control systems (*e.g.*, leachate collection and landfill gas collection piping) within and on top of the landfill surface. In addition, according to Allied Waste, the compaction techniques and procedures for a reduced working face could differ from what is described in NISL's CIWMB approved Operations Plan and result in regulatory noncompliance. While this Alternative could result in greater air quality, energy, water quality, and geology and soils impacts in comparison to the proposed project, it is not assumed that the impacts would be significant and unavoidable.

The City Council will have to determine whether or not reducing the Reduced Gull Access to Food Alternative is feasible when making a decision on the project.

8.5.3.2 *Relationship to Project Objectives*

The Reduced Gull Access to Food would meet all of the project's objectives (objectives A through E).

8.5.3.3 Conclusion

The Reduced Gull Access to Food Alternative would result in similar land use, visual and aesthetic, transportation, noise, hazards and hazardous materials, cultural resources, and utilities and service systems impacts as the project. This Alternative would reduce impacts to biological resources from gulls and other nuisance species, but might result in incrementally greater air quality, energy, water quality, and geology and soils impacts than the proposed project depending on how much the working face is reduced. However, these greater impacts are not likely significant and unavoidable. This Alternative would also meet all of the project's objectives.

As discussed above, Allied Waste believes the reduced working face component of this Alternative would be infeasible. Allied Waste believes reducing the working face of the landfill would result in safety hazards, reduce the landfill's ability to serve the public, reduce the landfill operator's ability to properly place and compact waste (which could result in voids or gaps and landfill instability), and result in regulatory noncompliance. It is not anticipated that enclosing the outside food processing area at the Recyclery would result in regulatory noncompliance. Moreover, Allied Waste believes this Alternative would not reduce gulls at the landfill. The City Council will have to determine whether or not the Reduced Gull Access to Food Alternative is feasible when making a decision on the project.

Enclosing the food processing area in a building or another type of enclosure (*e.g.*, netting) would reduce the gulls foraging on the Recyclery and could also avoid possible odor impacts from the outdoor processing of food waste (if processing area is enclosed in a building) to nearby residences in Milpitas.

8.5.4 Environmentally Superior Alternatives

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the discussion above, the environmentally superior alternatives to the proposed project are the Reduced Gull Access to Food Alternative because it would reduce the project's gull impacts and the Location Alternative because it would avoid the project's gull impacts (see Table 8.0-1). In the case of the Reduced Gull Access to Food Alternative, even just enclosing the food waste processing area at the Recyclery would be a superior alternative.

Table 8.0-1: Matrix Comparison of Project Alternative Impacts				
Impacts	Proposed Project	No Project Alternative	Location Alternative	Reduced Gull Access to Food Alternative
Land Use				
<i>Shade and Shadow</i>	LTS	LTS	LTS	LTS
<i>Trails</i>	LTS	LTS	LTS	LTS
<i>Compatibility</i>	LTS	LTS	LTS	LTS
Visual and Aesthetics	LTS	LTS	LTS	LTS
Transportation	LTS	LTS	LTS	LTS
Air Quality	LTS	LTS	LTS	SM
Noise	LTS	LTS	LTS	LTS
Biological Resources (gulls)	SM	SM	SM	SM
Geology and Soils	LTS	SM	SM	SM
Hydrology and Water Quality	LTS	LTS	LTS	SM
Hazards and Hazardous Materials	LTS	LTS	LTS	LTS
Cultural Resources	LTS	LTS	LTS	LTS
Utilities and Service Systems	LTS	LTS	LTS	LTS
Energy	LTS	LTS	LTS	LTS
Growth Inducing	LTS	LTS	LTS	LTS
Fully Meets Project Objectives	Yes	No	No	Yes
Notes: Bold text indicates environmentally superior to the proposed project. SM = Significant impact, but can be mitigated to a less than significant level SU = Significant and unavoidable impact LTS = Less than significant impact NI = No Impact				

SECTION 9.0

SIGNIFICANT IRREVERSABLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that would result from the implementation of a proposed project. Significant irreversible changes include the use of nonrenewable resources, the commitment of future generations to similar use, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources. Applicable environmental changes are described in more detail below.

9.1 USE OF NONRENEWABLE RESOURCES

The project proposes to rezone the project site to allow the maximum height of the landfill to be raised from 150 to 245 feet (NGVD29). The proposed zoning would also conform and clarify the legal non-conforming uses on NISL and will specify the allowable current and future uses on the landfill property and at the Recyclery. Operation of the proposed project (*i.e.*, the operation of the landfill and Recyclery) and the associated construction activities (including the construction of the two new stormwater detention ponds on the landfill and relocation of existing operations elsewhere on the landfill) will require the use and consumption of nonrenewable resources. Renewable resources, such as lumber and other wood byproducts, will also be used. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Nonrenewable resources include fossil fuels and metals.

Energy would be consumed during the operation and construction phases of the project. The proposed height expansion of the landfill results in increased landfill capacity. With the additional 15.12 million cubic yards of capacity, the landfill can continue to operate at the existing rate for a longer period of time. Therefore, the operation of the landfill under the proposed project would consume more energy than under existing conditions by maintaining the current operations for a longer period of time than would have been allowed under existing conditions. The operations of the project would consume energy for multiple purposes including lighting and operation of equipment. Energy, in the form of fossil fuels, would be used to fuel haul vehicles traveling to and from the project site.

Energy would be consumed in the relocation of existing operations and construction and/or expansion of new buildings/facilities (*e.g.*, GRS plant). The relocation of existing operations would require energy to move and transport facilities to different areas of the site and construct supporting infrastructure as necessary (*e.g.*, new stormwater lines to convey site runoff to the proposed retention ponds). The construction of new buildings and supporting infrastructure would require energy for the manufacture and transportation of building materials, preparation of the project site (grading), and the actual construction of the buildings and infrastructure.

The materials being buried at the landfill include and will continue to include items made of wood, metals (steel, aluminum, copper, and others), paper, fabric, etc. Much of these are capable of being recycled, but instead their landfill burial represents a permanent or semi-permanent loss of both the resources and the energy used to make them.

While the project does not propose to change the estimated closure date of the landfill of 2025, the project does extend the *useful* life of the landfill by increase the amount of available capacity at the landfill. The City does not have direct control over when the landfill closes, therefore, if by 2025, capacity remains at the landfill, it could continue to operate. For this reason, the approval of the project could result in the operation of the landfill for a longer period of time and the consumption of energy (including fuel) for a longer period of time.

However, without the project, contractual waste could need to transported and disposed of at Forward Landfill in Manteca, approximately 147 miles from NISL and non-contractual waste would likely be disposed of at Guadalupe Landfill, Kirby Canyon Landfill, or at landfills located further away in adjacent counties. As discussed in **Section 3.12 Energy**, delivering non-contractual waste elsewhere could consume more fuel because the travel time and/or distance to alternative landfills from the selected mid-point would be greater. Therefore, while the proposed project would extend the useful life of the landfill, in which energy (*e.g.*, electricity and diesel) would be consumed by the operation of the landfill, the continued operation of NISL would save fuel associated with transporting local waste to landfills located further away (refer to **Section 3.12 Energy**).

The project would result in an increase in demand upon nonrenewable resources. However, as discussed in **Section 3.12 Energy**, the project would save fuel associated with transporting local wastes to alternative landfills. In addition, as stated in **Section 2.0 Consistency with Relevant Plans and Policies**, the project is consistent with the City’s General Plan Energy Policy 5 by using alternative energy sources (*i.e.*, landfill gas being used to generate electricity).

9.2 COMMITMENT OF FUTURE GENERATIONS TO SIMILAR USE

The project would increase the landfill capacity and extend the useful life of the landfill. While the City has control over the total volume of waste received at the landfill, the City does not have direct control over the closure date of the landfill. Therefore, the approval of the proposed PD Zoning would allow indefinite landfill use as long as capacity remains at the landfill. The burial of the materials there represents a permanent (or likely permanent) loss of the irreplaceable resources and embedded energy uses to make the items.

9.3 IRREVERSIBLE DAMAGE RESULTING FROM ENVIRONMENTAL ACCIDENTS ASSOCIATED WITH THE PROJECT

As discussed in **Section 3.9 Hazards and Hazardous Materials**, NISL does not accept designated waste or hazardous wastes. The proposed project would not allow any new hazardous wastes (other than those already permitted) to be processed at the project site. In addition, the project would operate in accordance with the site’s Hazardous Materials Management Plan (HMMP) and Emergency Response/Contingency Plan to avoid and minimize impacts in the event of an accidental release, fire, and/or explosion.

The project site is located within a seismically active region and the existing landfill is subject to liquefaction-related slope stability independent of the proposed project. The landfill will be making improvements to the existing landfill to fix the existing liquefaction-related slope stability issue. As discussed in **Section 3.7 Geology and Soils**, the project would not result in significant seismic or seismic-related impacts.

The project would not result in significant hazards and hazardous materials impacts or geology and soil impacts, with the implementation of the identified avoidance measure to reduce liquefaction-related slope stability impacts. For this reason, the project would not likely result in irreversible damage that may result from environmental accidents (*i.e.*, accidental release, fire, explosion, or seismic event).

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SECTION 11.0

DEFINITION OF TERMS AND ACRONYMS

11.1 DEFINITION OF TERMS

The following table provides a list of terms and uses discussed in this EIR and their definition.

Term	Definition
Aerated static piles	Aerated static piles are a method of composting that provides forced aeration during periods when the piles are not being turned.
Beneficial reuse	Beneficial reuse refers to use at a landfill of a waste product for another purpose, sometimes requiring minor processing. Beneficial reuses of waste material received at Newby Island include utilization for alternative daily cover, alternative intermediate cover, final cover foundation layer, liner operations layer, leachate and landfill gas collection system, construction fill, road base, wet weather operations pads and access roads, and soil amendments for erosion control and landscaping. Beneficial reuse qualifies as recycling for state diversion goals, but it is used in this EIR to mean that it is re-used on the project site.
Compost	The product resulting from the controlled biological decomposition of organic wastes that are source separated from the municipal solid waste stream, or which are separated at a centralized facility. "Compost" can be made from vegetable, yard, and/or wood wastes which are not hazardous waste. (PRC§40116)
Composting (referenced in Table 1.4-1)	The controlled or uncontrolled biological decomposition of organic wastes. (PRC§40116.1) For this project, the composting operations includes the process of collecting, grinding, mixing, piling, and supplying sufficient moisture and air to organic materials to speed natural decay.
Construction and Demolition (C&D) wastes (debris)	Includes the waste building materials, packaging and rubble resulting from construction, remodeling, repair and demolition operations on pavements, houses, commercial buildings and other structures. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)
Contact water	Water that has come in contact with waste and may include leachate. (CCR, Title 14, Natural Resources-Division 7, CIWMB, Chapter 3. Minimum Standards for Solid Waste Handling and Disposal, 17402 Definitions.)
Education and Training Center (referenced in Table 1.4-1)	A space or structure (such as an outdoor kiosk or room in a building) set aside for public viewing. May include information about any or all on-site processes, including recycling and composting, and the community benefits associated with solid waste management.
Food waste	Food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food. This type includes material from industrial, commercial, or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. (California Integrated Waste Management Board. <u>Recycling and Waste Management Infrastructure Project, Definition of Waste and Recyclable Material Categories</u> . 30 January 2009.)
<u>Green waste</u>	<u>Biodegradable waste such as lawn and garden clippings.</u>

Term	Definition
Household hazardous waste	Hazardous waste materials discarded, typically in small quantities, by households (as opposed to large quantities disposed by businesses). Typical household hazardous wastes include used motor oil and oil filters, antifreeze and other vehicle fluids, paints and varnishes, pesticides, and cleaning supplies. (CIWMB. “Glossary of Terms.” 12 August 2009. Available at: http://www.ciwmb.ca.gov/LGcentral/Glossary/default.htm)
Household hazardous waste (HHW) turn-in and storage facility (referenced in Table 1.4-1)	A facility that would receive, store, and properly dispose of household hazardous wastes.
In-vessel composting	In-vessel composting is a method of composting biodegradable waste that occurs in enclosed spaces (metal containers, plastic bags, etc.).
<u>Landfill gas management systems and associated ancillary equipment/facilities (referenced in Table 1.4-1)</u>	<u>A facility that collects/manages the landfill gas generated. The facility can use the gas to generate electricity or export it. An example of this type of facility is NISL’s GRS facility which collects landfill gas through a system of wells and headers and uses the gas to generate electricity for on-site use or export. The GRS facility also treats and compresses landfill gas for export to the WPCP. The GRS facility includes landfill gas destruction flares.</u>
Leachate	Any liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste.
<u>Material Storage</u>	<u>Materials delivered to the site for disposal, recycling, or processing on-site and which are stockpiled or stored temporarily prior to shipment off-site.</u>
Materials Recovery Facility (MRF)	A Materials Recovery Facility (MRF) or “recycling facility” is a facility involved with the collecting, processing, and/or transferring of reusable or recyclable materials. (City of San José. Zoning Ordinance. 20.200.990.) Contaminants found in loads of recyclables, including garbage and hazardous materials, are removed and disposed of appropriately.
<u>Mixed Recyclables Processing (referenced in Table 1.4-1)</u>	<u>Receipt and processing of mixed recyclables obtained from dedicated residential, commercial, or industrial collection services.</u>
Municipal solid waste (MSW)	Also referred to as mixed municipal waste and garbage. Includes all kitchen and table food waste, and animal or vegetable waste that attends or results from the storage, preparation, cooking or handling of food stuffs. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)
<u>Office and employee facilities (referenced in Table 1.4-1)</u>	<u>Administrative offices, employee support functions such as lunch room, bathrooms, showers, etc.</u>
Organics	Materials that are or were recently living, such as leaves and grass (green waste) and wood (wood waste). Can also include Also includes agricultural crop residues and food scraps. (CIWMB. “Glossary of Terms.” 12 August 2009. Available at: http://www.ciwmb.ca.gov/LGcentral/Glossary/default.htm)
<u>Outdoor bin storage (referenced in Table</u>	<u>An area located outside where bins, such as waste containers, are stored.</u>

Term	Definition
<u>1.4-1)</u>	
Processing (referenced in Table <u>1.4-1)</u>	The reduction, separation, recovery, conversion, or recycling of solid waste. (PRC§40172)
Processing facility	A facility that receives solid waste for the purpose of storing, handling or processing the waste prior to transferring the waste to another solid waste operation or facility. (CCR, Title 14, Natural Resources-Division 7, CIWMB, Chapter 3. Minimum Standards for Solid Waste Handling and Disposal, 17402 Definitions.)
Public drop-off area (referenced in Table <u>1.4-1)</u>	Area where members of the public can drop off bulky discards and/or other recyclables.
Putrescible wastes (referenced in Table <u>1.4-1)</u>	Includes wastes that are capable of being decomposed by micro organisms with sufficient rapidity as to cause nuisances because of odors, gases or other offensive conditions. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)
Recyclable material	Materials which are segregated from other waste material for the purpose of recycling and includes, but is not limited to, paper, glass, metals, wood, plastics, yard wastes as defined in Section 9.10.380 of the City's Zoning Ordinance, bulky goods as defined in Section 9.10.040 of the City's Zoning Ordinance, and waste oil as defined in Section 9.10.370 of the City's Zoning Ordinance. (City of San José. Zoning Ordinance. 20.200.980.)
Recycle or recycling (referenced in Table <u>1.4-1)</u>	The process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace. (PRC§40180)
Recycling facility	A facility involved with the collecting, processing, and/or transferring of reusable or recyclable materials. (City of San José. Zoning Ordinance. 20.200.990.) Contaminants found in loads of recyclables, including garbage and hazardous materials, are removed and disposed of appropriately.
Recycling transfer facility	A facility that receives recyclable materials, as defined in the City's Zoning Ordinance, typically from small collection facilities, and commercial vehicles for the purpose of storing, handling, batching and baling, and/or sorting prior to transferring to another facility. Such a facility may be involved with recycling-related collection activities not allowed at small collection facilities. (City of San José. Zoning Ordinance. 20.200.1280.)
Salvaging	The controlled removal of waste material for utilization. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)
Solid waste	All putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated, or chemically fixed sewage sludge which is not hazardous waste, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes. (PRC§40191) Solid waste does not include any of the following wastes: (1) Hazardous waste; (2) Radioactive waste; and (3) Medical waste regulated pursuant to the Medical Waste.

Term	Definition
Solid waste hauling company corporation yard	An aggregation of various uses, activities, and facilities also listed in Table 1.4-1 of the EIR. All or some of which may change or cease over time.
Solid waste landfill (referenced in Table 1.4-1)	A disposal facility that accepts solid waste for land disposal. (PRC§40195.1)
Solid waste transfer facility (referenced in Table 1.4-1)	A facility that receives primarily solid waste materials, from commercial vehicles for the purpose of storing and handling prior to transferring to another facility. Such a facility may have limited recapture of recyclable materials as defined in the City's Zoning Ordinance. (City of San José. Zoning Ordinance. 20.200.1280.)
Source separated	Materials, including commingled recyclables, that have been separated or kept separate from the solid waste stream, at the point of generation, for the purpose of additional sorting or processing those materials for recycling or reuse in order to return them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace. (CCR, Title 14, Natural Resources-Division 7, CIWMB, Chapter 3. Minimum Standards for Solid Waste Handling and Disposal, 17402 Definitions.)
Treated wood waste	Treated wood waste is wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act.
Working or active face	The working surface of a landfill upon which solid wastes are deposited during the landfill operation, prior to the placement of cover material. (CCR, Title 27, Environmental Protection-Division 2, Solid Waste.)

11.2 LIST OF ACRONYMS

The following table provides a list of acronyms used in this EIR and their definition.

Acronym	Definition
ABAG	Association of Bay Area Governments
ADC	Alternate Daily Cover
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
CAP	Criteria Air Pollutant
C&D	Construction & Demolition
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFM	Cubic feet per minute
CFM	Cubic feet per minute
CIWMB	California Integrated Waste Management Board

Acronym	Definition
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESL	Environmental Screening Level
FAR	Federal Aviation Regulation
FESA	Federal Endangered Species Act
GRS	Gas Recovery System
HCM	Hydromodification Control Measures
HHW	Household Hazardous Waste
HMMP	Hazardous Materials Management Plan
JTD	Joint Technical Document
kW	Kilowatt
LCRS	Leachate Collection and Removal System
LEA	Local Enforcement Agency
MBTA	Federal Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGVD29	National Geodetic Vertical Datum of 1929
NISL	Newby Island Sanitary Landfill
NPDES	National Pollution Discharge Elimination System
NSAP	Nuisance Species Abatement Plan
PD	Planned Development
PRC	Public Resources Code
RWQCB	Regional Water Quality Control Board
SAAQS	State Ambient Air Quality Standards
SFBAAB	San Francisco Bay Area Air Basin
SFBBO	San Francisco Bay Bird Observatory
SWFP	Solid Waste Facility Permit
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCM	Treatment Control Measures
TPD	Tons per day
UGB	Urban Growth Boundary
USA	Urban Service Area
VMT	Vehicle Miles Traveled
VTAA	Valley Transportation Authority
WPCP	Water Pollution Control Plant

SECTION 12.0

LEAD AGENCY AND CONSULTANTS

12.1 LEAD AGENCY

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