AGENDA ITEM
Public Utilities Commission
City and County of San Francisco

DEPARTMENT Infrastructure Division AGENDA NO. **13**

MEETING DATE October 22, 2013

Approve Project-EIR: Regular Calendar
Program Director: Irina Torrey

Project No. CUW36702, Approve Project, Peninsula Pipelines Seismic Upgrade

Summary of Proposed Commission Action:	**Approve** Water Enterprise, Water System Improvement Program (WSIP) funded Project No. CUW36702 - Peninsula Pipelines Seismic Upgrade Project (Project) in northern San Mateo County, California; **adopt** the required California Environmental Quality Act (CEQA) Findings, including a Statement of Overriding Considerations, and the Mitigation Monitoring and Reporting Program (MMRP); and **authorize** the General Manager to implement the Project, in compliance with the Charter and applicable law, and subject to Board of Supervisors approval where required, including the following: a. Negotiate and obtain from Caltrans, City of Millbrae, City of San Bruno, City of South San Francisco, San Mateo County, San Mateo Union High School District, Shelter Creek Condominium Owner's Association, and Green Hills Country Club, as required, Memorandum of Agreements (MOA), License Agreements, encroachment permits, or other permits or agreements necessary or advisable in connection with proposed Project construction activities, the relocation of existing utilities owned or operated by any such entity within or adjacent to the Project area, and/or the placement, operation, and maintenance of water system improvements or related construction materials in lands owned or occupied by such entities. b. Exercise any City or San Francisco Public Utilities Commission (SFPUC or Commission) right under any deed, easement, lease, permit, license or other written agreement as required, and negotiate and execute with owners or occupiers of property interests or utility facilities or improvements or encroachments on, along, over, under, adjacent to, or in the vicinity of the SFPUC's watershed lands, new or amended easements, leases, permits, licenses, or other Project related agreements, if necessary for the Project.

APPROVAL: _____

COMMISSION SECRETARY Donna Hood

	c. Pursuant to Government Code Section 7260 *et seq.* statutory procedures, acquire, as necessary for Project construction, implementation, operation or maintenance, temporary or permanent interests in real property in: (1) Assessor's Parcel #019-170-020 owned by San Mateo Union High School District; (2) Assessor's Parcel #019-170-130 owned by Ng Cheuk Family Trust; (3) Assessor's Parcel #019-170-150 owned by Wong Thomas Wai-Kun Trust; (4) Multiple Assessor's Parcel Numbers owned by Shelter Creek Condominium Owner's Association in San Mateo County; (5) Assessor's Parcel #'s 021-490-050, 021-030-040, 021-030-020, 021-233-360, 021-490-040 owned by the City of Millbrae; (6) Assessor's Parcel #021-470-030 owned by Green Hills Country Club; (7) Assessor's Parcel #021-084-620 owned by Lomita Hills LLC; (8) Assessor's Parcel #008-421-120 owned by Kohl's Department Stores Lessee; (9) Assessor's Parcel #010-400-110 owned by Trans-Global LLC; and (10) Assessor's Parcel #010-400-240 owned by El Camino Enterprise LLC. d. Obtain permits or approvals, as necessary, in connection with Project construction, from local municipalities or counties, including but not limited to: (i) San Mateo County, City of Colma, City of Millbrae, City of San Bruno, and City of South San Francisco, and (ii) State and federal resource agencies, including but not limited to: U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service, California Department of Fish and Wildlife, and San Francisco Bay Regional Water Quality Control Board;, and enter into agreements with third parties as necessary to implement conditions of those permits or approvals. Implementation actions will include advertising for construction bids for the Project. However, the Commission will consider award of the construction contract(s) at a future public meeting.
Background:	The Project is one of the key regional projects to be completed as part of the WSIP. Approval of these actions will allow the SFPUC to proceed with public safety improvements to the regional water system that will increase the regional water system's overall seismic and delivery reliability objectives. The primary objectives of the proposed Project are to improve the seismic and delivery reliability of the three major transmission lines delivering water from the Harry Tracy Water Treatment Plant (HTWTP) through the Peninsula to the San Pedro Valve Lot. These Project objectives relate directly to the following WSIP goals and objectives (SFPUC Resolution No. 08-200): • <u>*Seismic Reliability*</u>. Deliver basic service to the three regions in the service area within 24 hours after a major earthquake and restore facilities to meet average-day demand within 30

	days after a major earthquake; and • *Delivery Reliability*. Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service; provide operational flexibility to minimize the risk of service interruption from unplanned facility upsets or outages; provide operational flexibility and system capacity to replenish local reservoirs as needed; and meet the estimated average annual demand under the conditions of one planned shutdown of a major facility for maintenance concurrent with one unplanned facility outage. Implementation of the proposed Project will further the established WSIP level of service objectives for seismic reliability and water delivery reliability listed above. The WSIP level of service objectives address the needs of the regional water system as a whole, and the Project, in combination with other facility improvement projects identified in the WSIP, is needed to fully meet these WSIP goals and objectives. This project includes: • Replacement of an approximately 700-foot segment of San Andreas Pipeline No. 2 (SAPL2) at the Colma Site; • Replacement of an approximately 720-foot segment of SAPL2 at the South San Francisco Site; • Stabilization of SAPL2 where it extends through a tunnel at the San Bruno North Site; • Replacement of an approximately 1,170-foot segment of SAPL2 and an approximately 1,050-foot segment of San Andreas Pipeline No. 3 (SAPL3) at the San Bruno South Site; and • Replacement of an approximately 900-foot segment of San Andreas Branch of the Sunset Supply Pipeline (SABSSP) at the Millbrae Site. The SFPUC intends to advertise, in one construction bid package, Peninsula Pipelines Seismic Upgrades Project and Project No. CUW2730502, San Andreas Pipeline 2 and San Andreas Pipeline 3 Improvements Project, a project also proposed for approval on the October 22, 2013 Commission Meeting agenda.
Result of Inaction:	Not implementing the project will restrict the SFPUC's ability to meet WSIP level of service goals and objectives for seismic reliability and delivery reliability.
Description of Project Action:	1. In order to move forward with the Project, the Commission must review and consider the certified Final Environmental Impact Report (EIR) (consisting of the Draft EIR and Response to Comments

	document) and adopt the Project CEQA Findings, including the Statement of Overriding Considerations and the MMRP. The Final EIR was provided to each member of the Commission. The Final EIR was prepared by the San Francisco Planning Department and certified as complete under CEQA by a Planning Commission Motion dated October 17, 2013. The Final EIR identified and analyzed Project-specific significant impacts and found significant or potentially significant impacts within the resource areas of land use, aesthetics, cultural resources, transportation and circulation, air quality, utilities and service systems, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials and cumulative impacts. Significant or potentially significant impacts will be reduced to a less than significant level by implementing the mitigation measures in the Final EIR and the MMRP during the design, construction, and post-construction phases, except for those potentially significant and unavoidable impacts caused by the Project and identified in the Final EIR. These potentially significant and unavoidable impacts include impacts to: • Noise and vibration due to temporary, construction-related, on-site noise and vibration and consistency with San Bruno and Millbrae's established noise and time limits for night time construction and dewatering activities. The CEQA Findings contain a Statement of Overriding Considerations justifying Project approval notwithstanding the potential for significant and unavoidable impacts, as authorized by CEQA. The CEQA Findings and MMRP are included as Attachments A and B, respectively, to the Commission Resolution for this agenda item. 2. Upon approval of the Project, SFPUC staff will proceed to implement the Project, including advertising for construction bids and obtaining necessary agreements and permits. Staff will seek Commission approval to award construction contract(s) at a future date. 3. The Project approval resolution authorizes the General Manager to obtain any necessary permits, consents from, and/or other agreements with, Caltrans, City of Millbrae, City of San Bruno, City of South San Francisco, San Mateo County, San Mateo Union High School District, Shelter Creek Condominium Owner's Association, and Green Hills Country Club, relating to proposed Project construction activities and the relocation of existing utilities owned or operated by these entities within or adjacent to the Project area. These permits or agreements shall be consistent with SFPUC existing fee or easement interests, where applicable. To the extent that the terms and conditions of the required permits, instruments, or agreements require SFPUC to

	indemnify other parties, those indemnity obligations are subject to review and approval by the San Francisco Risk Manager. The Commission Resolution authorizes the General Manager, in consultation with the City Attorney, to agree to other such terms and conditions (e.g. maintenance, repair, and responsibility for relocation of utilities or improvements) that are in the public interest, are consistent with the SFPUC's existing rights, and in the judgment of the General Manager, are reasonable and appropriate for the scope and duration of the requested use. 4. The Resolution also authorizes the General Manager, or his designee, to (i) exercise any City or SFPUC right under any deed, easement, lease, permit, license or other written agreement as necessary or advisable in connection with the Project, and (ii) negotiate and execute with owners or occupiers of property interests or utility facilities or improvements, on, along, over, under, adjacent to, or in the vicinity of the SFPUC's right-of-way, new or amended easements, leases, permits, licenses, encroachment removal, or other Project related agreements (each, a Use Instrument) with respect to uses and structures, fences, and other above-ground or subterranean improvements. The General Manager's authority so granted will include the authority, if necessary for the Project, to enter into, amend, or exercise rights under existing or new Use Instruments with any owner or occupier of property on, along, over, under, adjacent to, or in the vicinity of the SFPUC right-of-way, including Use Instruments required to accommodate Project construction activities or schedule, or to implement Project mitigation measures. The General Manager will confer with the Commission during the negotiation process on real estate agreements and financial assurances, as necessary, and report to the Commission on all agreements submitted to the Board of Supervisors for approval. Notwithstanding the authority granted to the General Manager by this Resolution, the General Manager is not authorized to dispose of any right-of-way or other SFPUC interest in real property, in any manner, including by sale, trade, or transfer, without approval by the SFPUC pursuant to Charter Section 8B124. Any such new or amended Use Instrument will be in a form that the General Manager determines is in the public interest and is acceptable, necessary, and advisable to effectuate the purposes and intent of this Commission Resolution, and in compliance with the Charter and all applicable laws, and approved as to form by the City Attorney. 5. Implementation of the Project will involve consultation with, or require approvals by, State and Federal regulatory agencies, including but not limited to the following: U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service, California Department of Fish and Wildlife, and San Francisco Bay Regional Water Quality Control Board (collectively Regulatory Agencies). The Resolution authorizes the General Manager to apply for, and if necessary, seek Board of Supervisors' approval, and, if approved, accept and execute required

	approvals by these Regulatory Agencies, and to negotiate and execute agreements with third parties as necessary to comply with, or implement, the conditions of approval imposed by those Agencies. To the extent that the terms and conditions of the necessary approvals, or related agreements, will require SFPUC to indemnify other parties, those indemnity obligations are subject to review and approval by the San Francisco Risk Manager. The Resolution authorizes the General Manager, in consultation with the City Attorney, to agree to such terms and conditions that are within the lawful authority of the agency to impose, in the public interest, and, in the judgment of the General Manager, are reasonable and appropriate for the scope and duration of the required approval, as necessary for the Project.
Environmental Review:	The San Francisco Planning Commission certified the Final EIR for Project No. CUW36702, Peninsula Pipelines Seismic Upgrade, on October 17, 2013.
Recommendation:	SFPUC staff recommends that the Commission adopt the attached resolution.
Attachments:	1. SFPUC Resolution 2. California Environmental Quality Act Findings (Attachment A) 3. Mitigation Monitoring and Reporting Program (Attachment B)

PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. _____

WHEREAS, San Francisco Public Utilities Commission (SFPUC) staff developed a project description under the Water System Improvement Program (WSIP) for the improvements to the regional water supply system, otherwise known as Project No. CUW36702, Peninsula Pipelines Upgrade Project (Project) in northern San Mateo County, California; and

WHEREAS, The Project is an improvement facility project approved by the SFPUC as part of the WSIP; and

WHEREAS, A Final Program Environmental Impact Report (PEIR) was prepared for the WSIP and certified by the Planning Commission on October 30, 2008 by Motion No. 17734; and

WHEREAS, Thereafter, the SFPUC approved the WSIP and adopted findings and a Mitigation Monitoring and Reporting Program (MMRP) as required by California Environmental Quality Act (CEQA) on October 30, 2008 by Resolution No. 08-200; and

WHEREAS, The PEIR has been made available for review by the SFPUC and the public, and is part of the record before this Commission;

WHEREAS, SFPUC staff has determined that the Project construction, implementation, operation or maintenance will possibly require the SFPUC to acquire, pursuant to Government Code Section 7260 *et seq.* statutory procedures, temporary or permanent interests in real property in: (1) Assessor's Parcel #019-170-020 owned by San Mateo Union High School District; (2) Assessor's Parcel #019-170-130 owned by Ng Cheuk Family Trust; (3) Assessor's Parcel #019-170-150 owned by Wong Thomas Wai-Kun Trust; (4) Multiple Assessor's Parcel Numbers owned by Shelter Creek Condominium Owner's Association in San Mateo County; (5) Assessor's Parcel #'s 021-490-050, 021-030-040, 021-030-020, 021-233-360, 021-490-040 owned by the City of Millbrae; (6) Assessor's Parcel #021-470-030 owned by Green Hills Country Club; (7) Assessor's Parcel #021-084-620 owned by Lomita Hills LLC; (8) Assessor's Parcel #008-421-120 owned by Kohl's Department Stores Lessee; (9) Assessor's Parcel #010-400-110 owned by Trans-Global LLC; and (10) Assessor's Parcel #010-400-240 owned by El Camino Enterprise LLC; and

WHEREAS, The Project requires that the General Manager be authorized to obtain, consistent with SFPUC existing fee or easement interests, where applicable, any necessary permits, consents from, and/or other agreements with, Caltrans, City of Millbrae, City of San Bruno, City of South San Francisco, San Mateo County, San Mateo Union High School District, Shelter Creek Condo Association, and Green Hills Country Club, relating to proposed Project construction activities and the relocation of existing utilities owned or operated by these entities within or adjacent to the Project area. To the extent that the terms and conditions of the required permits, instruments, or agreements require SFPUC to indemnify other parties, those indemnity obligations are subject to review and approval by the San Francisco Risk Manager. The Commission Resolution authorizes the General Manager, in consultation with the City Attorney,

to agree to other such terms and conditions (e.g. maintenance, repair, and responsibility for relocation of utilities or improvements) that are in the public interest, are consistent with the SFPUC's existing rights, and in the judgment of the General Manager, are reasonable and appropriate for the scope and duration of the requested use; and

WHEREAS, The Project requires that the General Manager or his designee be authorized , to (i) exercise any City or SFPUC right under any deed, easement, lease, permit, or license as necessary or advisable in connection with the Project, and (ii) negotiate and execute with owners or occupiers of property interests or utility facilities or improvements, on, along, over, under, adjacent to, or in the vicinity of the SFPUC's right-of-way, new or amended easements, leases, permits, licenses, encroachment removal, or other project related agreements (each, a Use Instrument) with respect to uses and structures, fences, and other above-ground or subterranean improvements. The General Manager's authority so granted will include the authority, if necessary for the Project, to enter into, amend, or exercise rights under existing or new Use Instruments with any owner or occupier of property on, along, over, under, adjacent to, or in the vicinity of the SFPUC right-of-way, including Use Instruments required to accommodate project construction activities or schedule, or to implement Project mitigation measures, but excluding the authority to dispose of any SFPUC real property interest. Any such new or amended Use Instrument will be in a form that the General Manager determines is in the public interest and is acceptable, necessary, and advisable to effectuate the purposes and intent of this Commission Resolution, and in compliance with the Charter and all applicable laws, and approved as to form by the City Attorney;

WHEREAS, The objectives of the Project are to upgrade segments of the San Andreas Pipeline No. 2 (SAPL2), San Andreas Pipeline No. 3 (SAPL3), and San Andreas Branch of Sunset Supply Pipeline (SABSSP) to meet current seismic standards in locations where they cross the Serra Fault, and achieve WSIP seismic reliability LOS goals; and

WHEREAS, On October 17, 2013, the San Francisco Planning Commission reviewed and considered the Final Environmental Impact Report (FEIR) for the Project in Planning Department File No. 2011.0123E, consisting of the Draft Environmental Impact Report (EIR) and the Comments and Responses document, and found that the contents of said report and the procedures through which the FEIR was prepared, publicized and reviewed complied with the provisions of the CEQA, the CEQA Guidelines and Chapter 31 of the San Francisco Administrative Code and found further that the FEIR reflects the independent judgment and analysis of the City and County of San Francisco, is adequate, accurate and objective, and that the Comments and Responses document contains no significant revisions to the Draft EIR, and certified the completion of said FEIR in compliance with CEQA and the CEQA Guidelines in its Motion No. _____; and

WHEREAS, The FEIR prepared for the Project is tiered from the PEIR, as authorized by and in accordance with CEQA and the CEQA Guidelines; and

WHEREAS, This Commission has reviewed and considered the information contained in the FEIR, all written and oral information provided by the Planning Department, the public, relevant public agencies, SFPUC and other experts and the administrative files for the Project and the EIR; and

WHEREAS, The Project and FEIR files have been made available for review by the SFPUC and the public, and those files are part of the record before this Commission; and

WHEREAS, The Planning Department, Steven H. Smith, is the custodian of records, located in File No 2011.0123E , at 1650 Mission Street, Fourth Floor, San Francisco, California; and

WHEREAS, SFPUC staff prepared proposed findings, as required by CEQA, (CEQA Findings) and a proposed MMRP, which material was made available to the public and the Commission for the Commission's review, consideration and action; now, therefore, be it

RESOLVED**,** This Commission has reviewed and considered the FEIR, finds that the FEIR is adequate for its use as the decision-making body for the actions taken herein, and hereby adopts the CEQA Findings, including the statement of overriding considerations, attached hereto as Exhibit A and incorporated herein as part of this Resolution by this reference thereto, and adopts the MMRP attached to this Resolution as Attachment B and incorporated herein as part of this Resolution by this reference thereto, and authorizes a request to the Board of Supervisors to adopt the same CEQA Findings, Statement of Overriding Considerations and MMRP; and be it

FURTHER RESOLVED, That this Commission hereby authorizes the SFPUC General Manager or his designee, to the extent necessary for Project construction, implementation, operation or maintenance, to undertake the process, in compliance with Government Code Section 7260 et seq., with the San Francisco Charter and all applicable laws, to take steps necessary to acquire, temporary or permanent interests in real property in: (1) Assessor's Parcel #019-170-020 owned by San Mateo Union High School District; (2) Assessor's Parcel #019-170-130 owned by Ng Cheuk Family Trust; (3) Assessor's Parcel #019-170-150 owned by Wong Thomas Wai-Kun Trust; (4) Multiple Assessor's Parcel Numbers owned by Shelter Creek Condominium Owner's Association in San Mateo County; (5) Assessor's Parcel #'s 021-490-050, 021-030-040, 021-030-020, 021-233-360, 021-490-040 owned by the City of Millbrae; (6) Assessor's Parcel #021-470-030 owned by Green Hills Country Club; (7) Assessor's Parcel #021-084-620 owned by Lomita Hills LLC; (8) Assessor's Parcel #008-421-120 owned by Kohl's Department Stores Lessee; (9) Assessor's Parcel #010-400-110 owned by Trans-Global LLC; and (10) Assessor's Parcel #010-400-240 owned by El Camino Enterprise LLC, and to seek Board of Supervisors' approval if necessary, and provided that any necessary Board approval has been obtained, to accept and execute final agreements, and any other related documents necessary to consummate the transactions contemplated therein, in such form, approved by the City Attorney; and be it

FURTHER RESOLVED, That this Commission authorizes the General Manager, or his designee, to obtain any necessary permits, consents from, and/or other agreements with Caltrans, City of San Bruno, City of South San Francisco, City of Millbrae, San Mateo County, San Mateo Union High School District, Shelter Creek Condominium Owner's Association, and Green Hills Country Club, relating to proposed Project construction activities and the relocation of existing utilities owned or operated by these entities within or adjacent to the Project area. These permits or agreements shall be consistent with SFPUC existing fee or easement interests, where applicable. To the extent that the terms and conditions of the required permits, instruments, or

agreements require SFPUC to indemnify other parties, those indemnity obligations shall be subject to review and approval by the San Francisco Risk Manager. The General Manager, in consultation with the City Attorney, may agree to other such terms and conditions (e.g. maintenance, repair, and responsibility for relocation of utilities or improvements) that are in the public interest, are consistent with the SFPUC's existing rights, and in the judgment of the General Manager, are reasonable and appropriate; and be it

FURTHER RESOLVED, That this Commission authorizes the General Manager, or his designee, to (i) exercise any City or SFPUC right under any deed, easement, lease, permit, or license as required or advisable in connection with the Project, and (ii) negotiate and execute with owners or occupiers of property interests or utility facilities or improvements, on, along, over, under, adjacent to, or in the vicinity of the SFPUC's right-of-way new or amended easements, leases, permits, licenses, encroachment removal, or other Project related agreements (each, a Use Instrument) with respect to uses and structures, fences, and other above-ground or subterranean improvements. The General Manager's authority so granted includes the authority, if necessary for the Project, to enter into, amend, or exercise rights under existing or new Use Instruments with any owner or occupier of property on, along, over, under, adjacent to, or in the vicinity of the SFPUC right-of-way, including Use Instruments required to accommodate Project construction activities or schedule, or to implement Project mitigation measures, but excluding the authority to dispose of any SFPUC real property interest. Any such new or amended Use Instrument will be in a form that the General Manager determines is in the public interest and is acceptable, necessary, and advisable to effectuate the purposes and intent of this Commission Resolution, and in compliance with the Charter and all applicable laws, and approved as to form by the City Attorney; and be it

FURTHER RESOLVED, That the General Manager or his designee is authorized to apply for, and if necessary, seek Board of Supervisors' approval, and, if approved, accept and execute required permits or approvals, as necessary, in connection with Project construction, from local municipalities or counties, including but not limited to: (i) San Mateo County, City of Colma, City of Millbrae, City of San Bruno, and City of South San Francisco, and (ii) by U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service, California Department of Fish and Wildlife, San Francisco Bay Regional Water Quality Control Board, and any other regulatory approvals as required. To the extent that the terms and conditions of the necessary approvals will require SFPUC to indemnify other parties, those indemnity obligations are subject to review and approval by the San Francisco Risk Manager. The General Manager, in consultation with the City Attorney, is authorized to agree to such terms and conditions that are within the lawful authority of the agency to impose, in the public interest, and, in the judgment of the General Manager, are reasonable and appropriate for the scope and duration of the required approval, as necessary for the Project; and be it

FURTHER RESOLVED, The General Manager or his designee is authorized to work with the Director of Real Estate to seek Board approval, to the extent required, and if approved, to accept and execute the real property agreements and Use Instruments authorized herein; and be it

FURTHER RESOLVED, The General Manager will confer with the Commission during

the negotiation process on real estate agreements and financial assurances, as necessary, and report to the Commission on all agreements submitted to the Board of Supervisors for approval. Notwithstanding the authority granted to the General Manager by this Resolution, the General Manager is not authorized to dispose of any right-of-way or other SFPUC interest in real property, in any manner, including by sale, trade, or transfer, without approval by the SFPUC pursuant to Charter Section 8B124; and be it

FURTHER RESOLVED, That the General Manager or his designee is authorized to enter into any subsequent additions, amendments, or other modifications to the permits licenses, Use Instruments and other agreements, or amendments thereto, as described herein, that the General Manager, in consultation with the Commercial Land Manager and the City Attorney, determines are in the best interests of the SFPUC and the City, do not materially decrease the benefits to the SFPUC or the City, and do not materially increase the obligations or liabilities of the SFPUC or the City, such determination to be conclusively evidenced by the execution and deliver of any such additions, amendments, or other modifications; and be it

FURTHER RESOLVED, that this Commission hereby approves Project No. CUW36702, Peninsula Pipelines Seismic Upgrade, and authorizes staff to proceed with actions necessary to implement the Project.

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of October 22, 2013.

_____

Secretary, Public Utilities Commission

Attachment A

Peninsula Pipelines Seismic Upgrade Project

California Environmental Quality Act Findings: Findings of Fact, Evaluation of Mitigation Measures and Alternatives, and Statement of Overriding Considerations

San Francisco Public Utilities Commission

In determining to approve the Peninsula Pipelines Seismic Upgrade (PPSU) Project (project) described in Section I, Project Description, below, the San Francisco Public Utilities Commission (SFPUC) makes and adopts the following findings of fact and decisions regarding mitigation measures and alternatives, and adopts the statement of overriding considerations, based on substantial evidence in the whole record of this proceeding and under the California Environmental Quality Act ("CEQA"), California Public Resources Code Sections 21000 et seq., particularly Sections 21081 and 21081.5, the Guidelines for Implementation of CEQA ("CEQA Guidelines"), 14 California Code of Regulations Sections 15000 et seq., particularly Sections 15091 through 15093, and Chapter 31 of the San Francisco Administration Code.

This document is organized as follows:

Section I provides a description of the project proposed for adoption, the environmental review process for the project, the approval actions to be taken and the location of records;

Section II identifies the impacts found not to be significant that do not require mitigation;

Section III identifies potentially significant impacts that can be avoided or reduced to less-than-significant levels through mitigation and describes the disposition of the mitigation measures;

Section IV identifies significant impacts that cannot be avoided or reduced to less-than-significant levels and describes any applicable mitigation measures as well as the disposition of the mitigation measures**;**

Section V evaluates the different project alternatives and the economic, legal, social, technological, and other considerations that support approval of the project and the rejection of the alternatives, or elements thereof, analyzed; and

Section VI presents a statement of overriding considerations setting forth specific reasons in support of the Commission's actions and its rejection of the alternatives not incorporated into the project.

The Mitigation Monitoring and Reporting Program ("MMRP") for the mitigation measures that have been proposed for adoption is attached with these findings as **Attachment B to Resolution No. _____**. The MMRP is required by CEQA Section 21081.6 and CEQA Guidelines

Section 15091. Attachment B provides a table setting forth each mitigation measure listed in the Final Environmental Impact Report for the project ("Final EIR") that is required to reduce or avoid a significant adverse impact. Attachment B also specifies the agency responsible for implementation of each measure and establishes monitoring actions and a monitoring schedule. The full text of the mitigation measures is set forth in Attachment B.

These findings are based upon substantial evidence in the entire record before the Commission. The references set forth in these findings to certain pages or sections of the Draft Environmental Impact Report ("Draft EIR" or "DEIR") or the Comments and Responses document ("C&R") in the Final EIR are for ease of reference and are not intended to provide an exhaustive list of the evidence relied upon for these findings.

I. Approval of the Project

A. Project Description

By this action, the SFPUC adopts and implements the PPSU Project identified in the Final EIR, including the following:

- Replacement of an approximately 700-foot segment of SAPL2 at the Colma Site.
- Replacement of an approximately 720-foot segment of SAPL2 at the South San Francisco Site.
- Stabilization of SAPL2 where it extends through a tunnel at the San Bruno North Site.
- Replacement of an approximately 1,170-foot segment of SAPL2 and an approximately 1,050-foot segment of SAPL3 at the San Bruno South Site.
- Replacement of an approximately 900-foot segment of SSBPL at the Millbrae Site.

B. Project Objectives

The three main objectives of the PPSU project are:

- Upgrade segments of the SAPL2, SAPL3, and SSBPL to meet current seismic standards in locations where they cross the Serra Fault, so that they can withstand the ground displacements potentially caused by a fault offset. This is intended to preserve water flow from the HTWTP to downstream facilities after a major San Andreas earthquake and achieve WSIP seismic reliability LOS goals.

- Minimize interruptions of water delivery during and following a seismic event by minimizing seismic vulnerabilities at the Serra Fault crossing locations, and by minimizing vulnerabilities at the liquefaction-susceptible zones.

- Reduce the physical, social, and economic impacts associated with the potential rupture of the existing SAPL2, SAPL3, and SSBPL during a major earthquake.

In addition, the project is part of the SFPUC's adopted Water System Improvement Program (WSIP) adopted by this Commission on October 30, 2008 (see Section C.1). The WSIP consists of over 70 local and regional facility improvement projects that would increase the ability of the SFPUC's water supply system to withstand major seismic events and prolonged droughts and to meet estimated water-purchase requests in the service areas. With the exception of the water

supply goal, the overall WSIP goals and objectives are based on a planning horizon through 2030. The water supply goal to meet delivery needs in the SFPUC service area is based on a planning horizon through 2018. The overall goals of the WSIP for the regional water system are to:

- Maintain high-quality water
- Reduce vulnerability to earthquakes
- Increase water delivery reliability
- Meet customer water supply needs
- Enhance sustainability
- Achieve a cost-effective, fully operational system

Although the PPSU project was not originally identified in the WSIP PEIR, it is considered a WSIP project. The goal of the proposed project is to improve the seismic reliability of transmission pipelines between Harry Tracy Water Treatment Plant and the Capuchino, Baden, and San Pedro Valve Lots in the event of a major earthquake on the San Andreas Fault. The objectives of the project would be achieved by completing proposed improvements designed to prevent the failure of SAPL2, SAPL3, and SSBPL, and maintain their reliability during a major seismic event. The Project would increase water delivery reliability and would therefore contribute to the SFPUC's ability to meet the WSIP goals.

C. Environmental Review

1. Water System Improvement Program Environmental Impact Report

On October 30, 2008, the SFPUC approved the Water System Improvement Program (also known as the "Phased WSIP") with the objective of repairing, replacing, and seismically upgrading the system's aging pipelines, tunnels, reservoirs, pump stations, and storage tanks (SFPUC, 2008; SFPUC Resolution No. 08-0200). The WSIP improvements span seven counties—Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo, and San Francisco (see SFPUC Resolution No. 08-0200).

To address the potential environmental effects of the WSIP, the San Francisco Planning Department prepared a Program EIR ("PEIR"), which was certified by the San Francisco Planning Commission on October 30, 2008 (Motion No. 17734). At a project-level of detail, the PEIR evaluated the environmental impacts of the WSIP's water supply strategy and, at a program level of detail, it evaluated the environmental impacts of the WSIP's facility improvement projects. The PEIR contemplated that additional project-level environmental review would be conducted for the facility improvement projects such as PPSU.

2. Peninsula Pipelines Seismic Upgrade Project Environmental Impact Report

In accordance with Sections 15063 and 15082 of the CEQA Guidelines, the San Francisco Planning Department, as lead agency, prepared a Notice of Preparation (NOP) and conducted a scoping meeting for the EIR. The San Francisco Planning Department released the NOP on November 8, 2011, and held a public scoping meeting on November 30, 2011, in the city of San Bruno.

The NOP was distributed to the State Clearinghouse, Northwest Information Center at Sonoma State University, and libraries on the mailing list. Copies of the NOP or NOP Notice of Availability were mailed to wholesale water customers; responsible and trustee agencies; other

agencies; SFPUC Citizen Advisory Committee members; other interested parties; local and bordering jurisdictions; media, libraries, and individuals; and owners and occupants of real properties surrounding the project area. The NOP was also posted on the San Francisco Planning Department's website. The scoping meeting was held at the San Bruno Chinese Church in San Bruno. 12 people attended. The purpose of the scoping meeting was to present the project description and receive oral comments regarding the scope of the Draft EIR for the proposed project.

The San Francisco Planning Department, Environmental Planning Division (EP), received comments on the NOP from November 9, 2011 through December 9, 2011. In addition to four verbal comments received during the scoping meeting, EP received five written comment letters. The comment inventory is included in the Scoping Report in Appendix B of the Draft EIR. Comments addressed environmental issues such as aesthetics, noise and vibration, transportation, biological resources, and water quality.

EP then prepared the Draft EIR, which described the project and the environmental setting, identified potential impacts, and presented mitigation measures for impacts found to be significant or potentially significant and evaluated project alternatives. The Draft EIR analyzed the impacts associated with each of the key components of the project, and identified mitigation measures applicable to reduce impacts found to be significant or potentially significant for each of those key components. It also included an analysis of two alternatives to the project. In assessing construction and operational impacts of the project, the EIR considered the impacts of the project as well as the cumulative impacts associated with the proposed project in combination with other past, present, and future actions that could affect the same resources.

Each environmental issue presented in the Draft EIR was analyzed with respect to significance criteria that are based on EP guidance regarding the environmental effects to be considered significant. EP guidance is, in turn, based on CEQA Guidelines Appendix G, with some modifications.

The Draft EIR was circulated to local, state, and federal agencies and to interested organizations and individuals for review and comment on March 13, 2013 for a 45-day public review period, which closed at 5:00 p.m. on April 29, 2013. Public hearings on the Draft EIR to accept written or oral comments were held at the San Bruno Chinese Church on April 16, 2013 and at the San Francisco Planning Commission meeting at San Francisco City Hall on April 18, 2013. During the public review period, EP received written comments sent through the mail, fax, or email. A court reporter was present at each of the public hearings, transcribed the public hearings verbatim, and prepared written transcripts.

EP then prepared the C&R document, which provided written responses to each comment received on the Draft EIR. The C&R document was published on September 27, 2013 and included copies of all of the comments received on the Draft EIR and individual responses to those comments. The C&R provided additional, updated information and clarification on issues raised by commenters, as well as SFPUC and Planning Department staff-initiated text changes to address project updates. The Planning Commission reviewed and considered the Final EIR, which

includes the Draft EIR and the C&R document, and all of the supporting information. The Final EIR provided augmented and updated information on many issues presented in the Draft EIR, including (but not limited to) the following topics: project description, aesthetics, transportation and circulation, recreation, biological resources, hydrology and water quality, and alternatives. In certifying the Final EIR, the Planning Commission determined that the Final EIR did not add significant new information to the Draft EIR that would require recirculation of the EIR under CEQA because the Final EIR contains no information revealing (1) any new significant environmental impact that would result from the project or from a new mitigation measure proposed to be implemented, (2) any substantial increase in the severity of a previously identified environmental impact, (3) any feasible project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the environmental impacts of the project, but that was rejected by the project's proponents, or (4) that the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. This Commission concurs in that determination.

The Final EIR fully analyzed the project proposed for approval herein. No new impacts have been identified that were not analyzed in the Final EIR.

D. Approval Actions

1. San Francisco Planning Commission Actions

On October 17, 2013, the Planning Commission certified the Final EIR.

2. San Francisco Public Utilities Commission Actions

The SFPUC is taking the following actions and approvals to implement the project:

- Adopt these CEQA findings and the attached Mitigation Monitoring and Reporting Program.

- Approve the project, as described herein, and authorization for the General Manager or his designee to obtain necessary permits, consents, agreements and approvals as set forth in the Commission's Resolution No._____ approving the project to which this Attachment A is attached.

3. San Francisco Board of Supervisors Actions

The Planning Commission's certification of the Final EIR may be appealed to the Board of Supervisors. If appealed, the Board of Supervisors will determine whether to uphold the certification or to remand the Final EIR to the Planning Department for further review.

The San Francisco Board of Supervisors approves an allocation of bond monies to pay for implementation of the project.

4. Other – Federal, State, and Local Agencies

Implementation of the project will involve consultation with or required approvals by other local, state, and federal regulatory agencies, including (but not limited to) the following:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Transportation
- State Historic Preservation Officer
- California Occupational Safety and Health Administration
- California Department of Fish and Wildlife
- State Water Resources Control Board
- San Francisco Bay Regional Water Quality Control Board
- State Department of Water Resources

To the extent that the identified mitigation measures require consultation or approval by these other agencies, this Commission urges these agencies to assist in implementing, coordinating, or approving the mitigation measures, as appropriate to the particular measure.

E. Findings about Significant Environmental Impacts and Mitigation Measures

The following Sections II, III, and IV set forth the SFPUC's findings about the Final EIR's determinations regarding significant environmental impacts and the mitigation measures proposed to address them. These findings provide the written analysis and conclusions of the SFPUC regarding the environmental impacts of the project and the mitigation measures included as part of the Final EIR and adopted by the SFPUC as part of the project. To avoid duplication and redundancy, and because the SFPUC agrees with, and hereby adopts, the conclusions in the Final EIR, these findings will not repeat the analysis and conclusions in the Final EIR but instead incorporate them by reference herein and rely upon them as substantial evidence supporting these findings.

In making these findings, the SFPUC has considered the opinions of SFPUC staff and experts, other agencies, and members of the public. The SFPUC finds that the determination of significance thresholds is a judgment decision within the discretion of the City and County of San Francisco; the significance thresholds used in the EIR are supported by substantial evidence in the record, including the expert opinion of the EIR preparers and City staff; and the significance thresholds used in the EIR provide reasonable and appropriate means of assessing the significance of the adverse environmental effects of the project. Thus, although, as a legal matter, the SFPUC is not bound by the significance determinations in the EIR (see Public Resources Code, Section 21082.2, subdivision (e)), the SFPUC finds them persuasive and hereby adopts them as its own.

These findings do not attempt to describe the full analysis of each environmental impact contained in the Final EIR. Instead, a full explanation of these environmental findings and conclusions can be found in the Final EIR and these findings hereby incorporate by reference the discussion and analysis in the Final EIR supporting the determination regarding the project

impact and mitigation measures designed to address those impacts. In making these findings, the SFPUC ratifies, adopts and incorporates in these findings the determinations and conclusions of the Final EIR relating to environmental impacts and mitigation measures, except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

As set forth below, the SFPUC adopts and incorporates all of the mitigation measures set forth in the Final EIR and the attached MMRP to substantially lessen or avoid the potentially significant and significant impacts of the project. The SFPUC intends to adopt each of the mitigation measures proposed in the Final EIR. Accordingly, in the event a mitigation measure recommended in the Final EIR has inadvertently been omitted in these findings or the MMRP, such mitigation measure is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in these findings or the MMRP fails to accurately reflect the mitigation measures in the Final EIR due to a clerical error, the language of the policies and implementation measures as set forth in the Final EIR shall control. The impact numbers and mitigation measure numbers used in these findings reflect the information contained in the Final EIR.

In Sections II, III and IV below, the same findings are made for a category of environmental impacts and mitigation measures. Rather than repeat the identical finding dozens of times to address each and every significant effect and mitigation measure, the initial finding obviates the need for such repetition because in no instance is the SFPUC rejecting the conclusions of the Final EIR or the mitigation measures recommended in the Final EIR for the project.

II. Impacts Found Not To Be Significant and Thus Do Not Require Mitigation

Under CEQA, no mitigation measures are required for impacts that are less than significant (Pub. Resources Code, Section 21002; CEQA Guidelines, Sections 15126.4, subdivision (a)(3), 15091). Based on the evidence in the whole record of this proceeding, the SFPUC finds that implementation of the project will not result in any significant impacts in the following areas and that these impact areas therefore do not require mitigation:

Land Use

- **Impact LU-2:** Project operations would not result in substantial long-term or permanent impacts on the existing character of the vicinity or could substantially impact or disrupt existing land uses or land use activities.

Aesthetics

- **Impact AE-1:** Project construction would not result in substantial adverse effects on scenic vistas or temporarily degrade the visual character of the site and its surroundings

- **Impact AE-3:** Project operations would not result in long-term adverse effects on scenic vistas or scenic resources, or degradation of the visual character of the site and its surroundings.

- **Impact C-AE:** Implementation of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts on scenic vistas, scenic resources, visual character, or light and glare.

Population and Housing

- There are no impacts related to population and housing.

Cultural Resources

- **Impact CP-1:** Project construction would not cause a substantial adverse change in the significance of a historical resource.

Transportation and Circulation

- **Impact TR-2:** Project construction would not result in inadequate emergency access.

- **Impact TR-4:** Vehicle trips generated during project operation and maintenance activities would not substantially conflict with an applicable congestion management program.

Air Quality

- **Impact AQ-2:** Project construction would not expose sensitive receptors to substantial pollutant concentrations.

- **Impact AQ-3:** Project construction would not create objectionable odors affecting a substantial number of people.

- **Impact AQ-4:** Project construction would not conflict with or obstruct implementation of the applicable air quality plan.

Greenhouse Gas Emissions

- **Impact GG-1:** Project construction would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment, or that would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

- **Impact C-GG:** Project construction would not result in a cumulatively considerable contribution to GHG emissions.

Wind and Shadow

- There are no impacts related to wind and shadow.

Recreation

- **Impact C-RE:** Construction of the project would not result in a cumulatively considerable contribution to cumulative impacts on recreational resources or uses.

Utilities and Service Systems

- **Impact UT-3:** Project construction would not result in a substantial adverse effect related to water supply availability.

- **Impact UT-4:** Project construction would not result in a substantial adverse effect related to landfill capacity.

Public Services

- There are no impacts related to public services.

Geology and Soils

- **Impact GE-2:** The project would not be located on a geologic unit that is unstable or that would become unstable as a result of the project.

- **Impact GE-3:** The project operations would not expose people or structures to potential substantial adverse effects involving surface fault rupture, groundshaking, ground failure, or landslides.

- **Impact GE-4:** During project operations, the project sites are not likely to become unstable.

- **Impact GE-5:** The proposed project would not be located on expansive soils that could create substantial risks during project operations.

Hydrology and Water Quality

- **Impact HY-2:** Dewatering of excavated areas during project construction would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge.

- **Impact HY-3:** Discharges of dewatering effluent from excavated areas during project construction would not substantially degrade water quality.

- **Impact HY-4:** Discharges of treated water from existing and newly installed pipelines during project construction would not substantially degrade water quality.

Hazards and Hazardous Materials

- **Impact HZ-1**: Project construction would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- **Impact HZ-3**: Project construction would not result in emissions or use of hazardous materials or substances within 0.25 mile of a school during construction.

- **Impact HZ-4**: Project construction would not result in public airport-related aviation hazards during construction**.**

- **Impact HZ-5:** Project construction would not impair implementation of, or physically interfere with, an emergency response plan or emergency evacuation plan.

Mineral and Energy Resources

- **Impact ME-1:** Project construction would not encourage activities that would result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.

- **Impact C-ME:** Project implementation would not result in a cumulatively considerable contribution to the use of fuel, water, or energy resources in a wasteful manner.

Agricultural and Forest Resources

- There are no impacts related to agricultural and forest resources.

III. Findings of Potentially Significant or Significant Impacts That Can Be Avoided or Reduced to a Less-Than-Significant Level through Mitigation and the Disposition of the Mitigation Measures

CEQA requires agencies to adopt mitigation measures that would avoid or substantially lessen a project's identified significant impacts or potential significant impacts if such measures are feasible (unless mitigation to such levels is achieved through adoption of a project alternative). The findings in this Section III and in Section IV concern mitigation measures set forth in the EIR. These findings discuss mitigation measures as proposed in the EIR and recommended for adoption by the SFPUC, which can be implemented by the SFPUC. The mitigation measures proposed for adoption in this section are the same as the mitigation measures identified in the Final EIR for the project. The full text of the mitigation measures is contained in the Final EIR and in Attachment B, the MMRP. The Commission finds that the impacts identified in this section would be reduced to a less-than-significant level through implementation of the mitigation measures contained in the Final EIR and set forth in Attachment B.

This Commission recognizes that some of the mitigation measures are partially within the jurisdiction of other agencies, including the U.S. Fish and Wildlife Service, the California Department of Fish and Game, the Regional Water Quality Control Board, and the U.S. Army Corps of Engineers. The Commission urges these agencies to assist in implementing these mitigation measures, and finds that these agencies can and should participate in implementing these mitigation measures.

Project Impacts

Impact LU-1: Project construction could have a substantial temporary direct or indirect impact on the existing character of the vicinity or could substantially impact or disrupt existing land uses or land use activities. (Less than Significant with Mitigation)

The project sites are located in the vicinity of land uses that could be sensitive to temporary construction impacts such as increased traffic, noise, vibration, dust, and exhaust emissions, or nighttime lighting. These factors would be considered indirect impacts because they could contribute to changes in the character of land uses, but would not directly alter or displace them.

Construction activities associated with the proposed project would involve the operation of diesel-powered construction equipment and vehicles, and would increase noise, traffic, dust and emissions of criteria air pollutants. In addition, project construction would increase vehicle and truck traffic along neighborhood roadways, which would generate noise and diesel emissions and potentially increase traffic safety risks for adjacent land uses, due to the increased potential for conflicts between construction vehicles and pedestrians, bicyclists, and non-construction-related automobiles. The combination of construction-related traffic, noise/vibration, and dust/exhaust emissions could adversely affect daytime residential land use activities nearby. Similarly, disruptions could occur to recreational activities such as playing golf, or to educational activities. These disruptions would be temporary; however, during the construction period they could substantially change the character of the vicinity or disrupt adjacent land uses or land use activities, resulting in significant land use impacts.

- *Mitigation Measure M-LU-1a: Notice of Construction Activities*
- *Mitigation Measure M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts*
- *Mitigation Measure M-RE-1: Coordination with Green Hills Country Club Facility Managers*

Impact AE-2: Project construction could result in significant impacts related to a new source of substantial light or glare. (Less than Significant with Mitigation)

Daytime construction activities would not be anticipated to produce substantial light or glare; if lighting is used during the day, it would be directed toward areas of excavation, and would likely not be substantially different from the natural daytime condition. However, because lighting could be visible from the adjacent residences as well as from I-280, impacts from lighting or glare during nighttime construction at the San Bruno North site could result in a significant impact.

- *Mitigation Measure M-AE-2: Site-Specific Construction Lighting Plan*
- *Mitigation Measure M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts*

Impact CP-2: Project construction could cause a substantial adverse change in the significance of a historical or unique archaeological resource. (Less than Significant with Mitigation)

No archaeological resources were identified within the C-APE defined for the proposed project. However, that one prehistoric archaeological site CA-SMA-95 is purportedly within the immediate vicinity of the C-APE. In addition Colma and South San Francisco sites include some construction within undisturbed soils of moderate archaeological sensitivity. Implementation of the project, including excavation, trenching, grading, and the movement of heavy construction vehicles and equipment, could expose and disturb or damage previously unrecorded archaeological resources at the Colma, South San Francisco, San Bruno South, and Millbrae sites, which would be a potentially significant impact.

- *Mitigation Measure M-CP-2a: Distribute "ALERT" Sheet;*
- *Mitigation Measure M-CP-2b: Conduct Archaeological Monitoring in Accordance with Approved Archaeological Monitoring Plan;*
- *Mitigation Measure M-CP-2c: Prepare and Comply with an Archaeological Evaluation Plan and Evaluation Report.*

Impact CP-3: Project construction could result in a substantial adverse effect by directly destroying a unique paleontological resource or site. (Less than Significant with Mitigation)

The paleontological C-APE for the PPSU project is underlain by artificial fill, Holocene alluvium, slope debris and ravine fill, Colma Formation, Merced Formation, and Franciscan Complex Geologic units. No paleontological resources are known to exist within the project C-APE however, paleontological resources have been found in the some of the same geologic contexts as that which occur within the project area. Project construction could destroy a unique paleontological resource which would be a potentially significant impact.

- *Mitigation Measure M-CP-3: Prepare and Implement a Paleontological Resources Monitoring Program.*

Impact CP-4: Project construction could result in a substantial adverse effect related to the disturbance of human remains. (Less than Significant with Mitigation)

Although no known human burial locations have been identified within the project C-APE, the possibility that human humans could be inadvertently exposed during ground-disturbing activities cannot be entirely discounted. Therefore, implementation of the project could result in direct impacts on previously undiscovered human remains, including those interred outside of formal cemeteries during any ground-disturbing activities, which would be potentially significant.

- *Mitigation Measure M-CP-4: Treatment of Inadvertently Discovered Human Remains.*

Impact TR-1: Project construction could substantially conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of travel. (Less than Significant with Mitigation)

Due to the nature of the PPSU project (improvements to an existing water supply system), the project would not permanently affect the transportation and circulation system but there would be

potential impacts on the overall transportation and circulation system during construction activities, including roadways, public transit, bicycle facilities, and pedestrian facilities.

The PPSU project would result in short-term increases in construction-related vehicle trips on area roadways. Also, the addition of construction vehicle traffic to the current roadway volumes could result in increased congestion and delay for vehicles. The presence of construction truck traffic would temporarily reduce roadway capacities due to the slower travel speeds and larger turning radii of trucks.

For the San Bruno North site, the temporary closures of the right-turn lane of the I-280 off-ramp and the eastbound San Bruno Avenue West lane adjacent to the project site may occur simultaneously would affect the Level of Service (LOS) of the intersection of I-280 Northbound ramps/San Bruno Avenue West. The intersection would operate at LOS E during the a.m. peak hour, which would not be an acceptable LOS per San Francisco Planning Department or City of San Bruno traffic policy, and is therefore, considered to be a significant impact.

- *Mitigation Measure M-TR-1: Maintain Traffic Flow on San Bruno Avenue West During the A.M. Peak Hour*

Impact TR-3: Project construction activities could decrease the safety of public roadways for vehicles, bicyclists, and pedestrians. (Less than Significant with Mitigation)

Construction vehicles traveling to and from the project sites and the common staging area would share the roadway with other vehicles, as well as with bicyclists. The increase in vehicles traveling to and from the project sites during construction could increase traffic safety hazards due to potential conflicts between construction vehicles (with slower speeds and wider turning radii than autos) and automobiles, bicyclists, and pedestrians. The potential increase in traffic safety hazards during construction is considered to be a potentially significant impact.

- *Mitigation Measure M-TR-3: Traffic Control Plan*

Impact AQ-1: Project construction could violate air quality standards or contribute significantly to an existing air quality violation. (Less than Significant with Mitigation)

Fugitive dust emissions are typically generated during construction phases. Project construction would generate fugitive dust (including PM_{10} and $PM_{2.5}$) during various construction activities, including excavation, grading, demolition, and vehicle travel on both paved and unpaved surfaces.

Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, grading, and other construction activities can cause wind-blown dust to add to particulate matter in the local atmosphere. Impacts from uncontrolled fugitive dust from construction activities could be potentially significant.

- *Mitigation Measure M-AQ-1: BAAQMD Basic Construction Measures*

Impact RE-1: The proposed project could temporarily degrade existing recreational uses during construction. (Less than Significant with Mitigation)

PPSU project activities include tree removal and pipeline upgrades at the Millbrae site. Construction activities would displace a portion of the active fairway in the vicinity of the fifth

hole of the Green Hills Country Club golf course for a period of approximately 4.5 months. During tree removal and pipeline construction, the SFPUC proposes to use the driving range at Green Hills Country Club as an access route, requiring complete temporary closure of the driving range for the safety of construction workers. Temporary closure of the driving range would not affect the ability to complete a round of golf on the Green Hills course. However, the obstruction of the use of the fifth hole from project construction would be a significant impact.

- *Mitigation Measure M-RE-1: Coordination with Green Hills Country Club Facility Managers*

Impact UT-1: Project construction could result in a substantial adverse effect related to disruption of utility operations or accidental damage to existing utilities. (Less than Significant with Mitigation)

Excavation activities, and removal and installation of the proposed project pipelines could result in accidental damage to existing regional or local utility lines or disruption of utility services. The use of cranes and other construction equipment to remove pipeline segments could result in accidental damage to existing overhead utility lines. In addition, overhead utility poles and underground utility lines along area roadways could be susceptible to accidental damage from the movement of large construction equipment and vehicles throughout the project sites.

A number of underground utility lines cross the project sites, including electrical and telecommunication lines, and several water supply pipelines. Accidental rupture of or damage to these utility lines during project construction could temporarily disrupt utility services and, in the case of the PG&E electrical cables located at the San Bruno North site, could result in significant safety hazards for construction workers. For these reasons, impacts on existing utilities and utility services during project construction would be potentially significant.

- *Mitigation Measure M-UT-1a: Confirm Utility Line Information*
- *Mitigation Measure M-UT-1b: Safeguard Employees from Potential Accidents Related to Underground Utilities*
- *Mitigation Measure M-UT-1c: Notify Local Fire Departments*
- *Mitigation Measure M-UT-1d: Emergency Response Plan*
- *Mitigation Measure M-UT-1e: Ensure Prompt Reconnection of Utilities*
- *Mitigation Measure M-UT-1f: Coordinate Final Construction Plans with Affected Utilities*

Impact UT-2: Project construction could result in a substantial adverse effect related to the relocation of regional or local utilities. (Less than Significant with Mitigation)

The proposed alignments for the SAPL2, SAPL3, and SSBPL would cross beneath or above existing utilities at several locations. Although the PPSU project does not propose to relocate such utilities owned and operated by other utility companies, relocation may become necessary once the locations and characteristics of conflicting utilities are confirmed. Removal, replacement, or stabilization of the pipelines could require temporary or permanent relocation of utility lines that are owned and operated by other utility companies. Therefore, because such

relocation could cause health hazards to workers associated with relocation work, or disruptions to the service area during relocation, impacts related to utility relocation are considered potentially significant.

- *Mitigation Measure M-UT-1a: Confirm Utility Line Information*
- *Mitigation Measure M-UT-1b: Safeguard Employees from Potential Accidents Related to Underground Utilities*
- *Mitigation Measure M-UT-1c: Notify Local Fire Departments*
- *Mitigation Measure M-UT-1d: Emergency Response Plan*
- *Mitigation Measure M-UT-1e: Ensure Prompt Reconnection of Utilities*
- *Mitigation Measure M-UT-1f: Coordinate Final Construction Plans with Affected Utilities*

Impact UT-5: Project construction could result in a substantial adverse effect related to compliance with federal, State, and local statutes and regulations pertaining to solid waste. (Less than Significant with Mitigation)

To reduce the quantity of material to be sent to the landfill, as required by the California Integrated Waste Management Act, spoils excavated during construction would be reused as backfill, if they are of a suitable quality. Excess soil or soil that is inadequate for backfill (i.e., rocky) would be hauled off site for recycling, if possible, or disposal if no reasonable alternative for reusing or recycling is possible. Construction debris, including shoring materials, old pipe materials, and pavement, would be off-hauled as needed during construction and once construction is completed. Up to approximately 32,190 cubic yards of materials would be off-hauled. It is unknown whether this quantity of waste would affect the 50 percent solid waste diversion goal set by the California Integrated Waste Management Act. Therefore, impacts related to compliance with federal, State, and local regulations related to solid waste would be considered to be potentially significant.

- *Mitigation Measure M-UT-5 Prepare and Implement a Construction Solid Waste Recycling Plan*

Impact BI-1: Construction of the proposed project could have a substantial adverse effect through habitat modification on special-status wildlife species. (Less than Significant with Mitigation)

The project involves tree removal, site clearing, grading, and excavation, which could potentially affect nesting birds and raptors and other wildlife and their habitats. Potential dispersal habitat for California red-legged frogs is located in the South San Francisco Site. Mission blue butterfly habitat occurs within the Milbrae site, and trees located on various sites provide habitat for nesting birds and raptors as well as bats. Construction of the proposed project could result in significant impacts associated with the temporary loss of habitat for Mission blue butterfly and temporary loss of potential California red-legged frog dispersal habitat; and loss of breeding habitat for San Francisco dusky-footed woodrat, birds, raptors, and bats.

- *Mitigation Measure M-BI-1a: General Protection Measures*

- *Mitigation Measure M-BI-1b: Worker Training and Awareness Program*
- *Mitigation Measure M-BI-1c: Prepare and Implement a Vegetation Restoration Plan*
- *Mitigation Measure M-BI-1d: Minimize Disturbance to Nesting Birds and Raptors*
- *Mitigation Measure M-BI-1e: Preconstruction Surveys for Special-Status Bats and Avoidance and Minimization Measures*
- *Mitigation Measure M-BI-1f: Mitigation for the Mission Blue Butterfly*
- *Mitigation Measure M-BI-1g: Mitigation for San Francisco Dusky-Footed Woodrat Middens*
- *Mitigation Measure M-BI-1h: Mitigation for the California Red-Legged Frog*
- *Mitigation Measure M HY 1: Preparation and Implementation of a Storm Water Pollution Prevention Plan*

Impact BI-2: Construction of the proposed project could have a substantial adverse effect on coast live oak woodland, central coast riparian scrub habitat, or other sensitive natural community. (Less than Significant with Mitigation)

Project construction would remove approximately 0.17 acre of riparian scrub vegetation. The removal of mature and emergent Central Coast riparian scrub along with native and nonnative vegetation located along the SFPUC ROW would be a significant impact on riparian habitat. The mature willows provide essential habitat for many species of birds and mammals including special-status species that depend on them for breeding, cover, and foraging. Removal of this vegetation would temporarily decrease the availability of food and shelter for wildlife.

- *Mitigation Measures M-BI-2a: Minimize Disturbance to Riparian Habitat*
- *M-BI-2b: Supplemental Measures for the Vegetation Restoration Plan*
- *Mitigation Measures M-BI-1a: General Protection Measures*
- *M-BI-1b: Worker Training and Awareness Program,*
- *M-BI-1c: Prepare and Implement a Vegetation Restoration Plan*

Impact BI-3: Construction of the proposed project could have a substantial adverse effect on jurisdictional waters. (Less than Significant with Mitigation)

Several water conveyance features extend through the project sites; three of these features would be under U.S. and State jurisdiction. Two concrete culverts convey creeks in the project sites: an unnamed tributary of Colma Creek extends under the Colma site and a portion of Twelve Mile Creek extends under the South San Francisco site. These areas would be classified as "other waters" of the United States. In addition, a concrete v-ditch located at the Millbrae site at the eastern end of Larkspur Drive adjacent to the Green Hills Country Club would be under U.S. jurisdiction. At the Colma site, the project activities would require the demolition of a portion of the culvert and the diversion of the upstream flow around the construction area by use of a temporary pipeline and cofferdams to maintain natural flow in the culvert downstream of the

construction area, potentially resulting in significant impacts to jurisdictional waters. Construction-related impacts on jurisdictional waters would be potentially significant.

- *Mitigation Measure M-BI-3: Avoidance and Protection Measures for Jurisdictional Water Bodies*
- *Mitigation Measure M-BI-1a: General Protection Measures*
- *Mitigation Measure M-BI-1b: Worker Training and Awareness Program*
- *Mitigation Measure M-HY-1: Preparation and Implementation of a SWPPP*

Impact BI-4: Construction of the proposed project could be inconsistent with local policies or ordinances protecting biological resources, including trees. (Less than Significant with Mitigation)

Tree removal and pruning would be required for construction of the project at the South San Francisco site. The City of South San Francisco protects street trees (which are trees in a public area along a city street), as well as any tree with a circumference of 48 inches or more when measured 54 inches above natural grade, or trees or stands of trees that have been designated as protected because they are of importance to the public due to their unusual appearance, location, or historical significance. The city has not designated a replacement ratio for protected trees. No street trees will be removed from the site; however, a dense stand of willows (approximately 20 trees) would be removed, resulting in a significant impact.

At the San Bruno North site, tree removal may be required to allow for excavation of access pits to the tunnel, and to allow for construction staging. If trees protected by the ordinance are removed, it would result in inconsistencies with the city's Municipal Code, resulting in a significant impact.

- *Mitigation Measure M-BI-1a: General Protection Measures*
- *Mitigation Measure M-BI-4: Replacement of Trees to Be Removed*

Impact GE-1: The project construction could result in substantial soil erosion or the loss of topsoil. (Less than Significant with Mitigation)

Implementation of the proposed project would require excavation of up to approximately 60,940 cubic yards of soils to allow for the replacement and upgrade of existing pipelines. A portion of the soils would be reused on site and the remaining soils would be off-hauled. The excavation of these sites could result in substantial soil erosion during the rainy season. Additionally, the discharge and dewatering of water from the pipelines during construction could result in downstream erosion. The removal of the topsoil during site preparation and excavation activities could result in the permanent loss of these soils. While it is possible that topsoil was previously disturbed or removed from these sites during the installation of the existing pipelines, whatever topsoil does remain would be removed during project construction activities. The removal of topsoil could result in a significant loss of topsoil.

- *Mitigation Measure M-BI-1a: General Protection Measures*
- *Mitigation Measure M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan*

Impact HY-1: Project construction could substantially violate water quality standards or waste discharge requirements or degrade water quality as a result of erosion and sedimentation or an accidental release of hazardous chemicals. (Less than Significant with Mitigation)

The project would include construction activities that involve soil disturbance that in the absence of proper controls could degrade the water quality of nearby creeks that flow to San Francisco Bay, particularly if these activities occur during the rainy season. These soil disturbance activities include vegetation removal, excavation, soil stockpiling, backfilling, compacting, grading, site restoration, and landscaping. While some construction activities are anticipated to occur during the spring/summer season, construction at the sites is anticipated to occur during the winter (rainy) season. The use of construction equipment could accidentally release oils, grease, and fuel that could degrade water quality.

Open-trench construction techniques would be used at many of the PPSU project sites. Excavated soils, including topsoil, would be stockpiled during construction at each site, and may be reused as backfill, for restoration, and/or off-hauled for recycling or disposal. Construction debris, including shoring materials, old pipe materials, and pavement, would be off-hauled as needed during construction and once construction is completed. In the absence of proper controls, these construction activities could result in erosion and sedimentation, which would be a significant impact.

- *Mitigation Measure M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan*

Impact HZ-2: Project construction could 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. (Less than Significant with Mitigation)

There is a low potential to encounter hazardous materials in the soil and groundwater during project construction. However, for all of the project sites it cannot be determined with certainty whether excavated materials would contain potentially hazardous soil and/or groundwater wastes. In addition, construction materials typically used during construction activities include varying amounts of hazardous materials. The materials expected to be used and stored at the project sites and staging areas include fuels (diesel and gasoline), lubricants, paints, solvents, and flammable gases for welding. If an accident occurred involving such hazardous materials during construction, exposure to hazardous materials could potentially pose a health risk to construction workers through ingestion, inhalation, or dermal contact; or to the public if unauthorized access to the materials occurred. Such an impact would be considered potentially significant.

- *Mitigation Measure M-HZ-2a: Prepare and Implement a Hazardous Material Handling and Disposal Plan*
- *Mitigation Measure M-HZ-2b: Develop and Implement a Hazardous Material Business Plan*
- *Mitigation Measure M-HZ-2c: Develop and Implement a Health and Safety Plan*
- *Mitigation Measure M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan*

Cumulative Impacts

Impact C-LU: Project construction could result in a cumulatively considerable contribution to cumulative impacts on existing land uses. (Less than Significant with Mitigation)

Air quality, traffic and traffic safety hazards, or noise impacts from the cumulative projects could result in indirect cumulative land use impacts, if such impacts were to occur at the same time and in similar locations as similar impacts associated with the PPSU project. This could result in indirect land use impacts, because they could contribute to changes in the character of land uses (although they would not directly alter or displace them). Two of the identified cumulative projects have the potential to overlap with the PPSU project schedule at four PPSU locations: the GSR project could overlap with construction activities at the Colma and South San Francisco sites, as well as the common staging area (as described above); and the Harry Tracy Water Treatment Plant Long-Term Improvements project could overlap with PPSU tree removal activities at the Millbrae site (this project would not be in close enough proximity to the PPSU project at this site to result in direct cumulative land use impacts). Depending on the severity of the impacts and the degree to which they overlap, indirect cumulative impacts on land use could be significant. .However with implementation of project-level mitigation measures, the project's contribution to these cumulative impacts would not be cumulatively considerable.

- *Mitigation Measure LU-1a:Notice of Construction Activities*
- *Mitigation Measure LU-1b:Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Impacts*

Impact C-CP: Project construction could result in a cumulatively considerable contribution to cumulative impacts on cultural resources such as archaeological sites (historical and/or unique) including those with human remains, historic architectural or paleontological resources. (Less than Significant with Mitigation)

The geographic scope for cumulative impacts on cultural resources includes the individual archaeological, historic architectural and paleontological C-APEs as defined for the PPSU project, and for archaeological and paleontological resources, the San Francisco Peninsula region as a whole..

During ground-disturbing activity, there is a potential for the cumulative projects to encounter previously unidentified cultural resources, including archaeological resources. Disturbance of these resources during construction of the PPSU project or other cumulative projects could result in significant cumulative impacts on archaeological resources. The PPSU project’s contribution to this impact could be cumulatively considerable.

Significant impacts to inadvertently exposed paleontological resources could occur with implementation of other projects in the vicinity because the projects could entail excavation in soils with high paleontological sensitivity, potentially resulting in disturbance of paleontological resources. Similarly, the proposed project could impact paleontological resources, given that portions of the project sites are located in areas of high sensitivity. The PPSU project’s contribution to this impact could be cumulatively considerable.

The cumulative projects, together with the PPSU project, could disturb human remains during ground-disturbing activities. Inadvertent disturbance of human remains would result in significant cumulative adverse impacts if the remains are not properly handled, analyzed, and treated.

However, with implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measures M-CP-2a: Distribute "ALERT" Sheet,*
- *Mitigation Measure M-CP-2b: Conduct Archaeological Monitoring in Accordance with Approved Archaeological Monitoring Plan,*
- *Mitigation Measure M-CP-2c: Prepare and Comply with an Archaeological Evaluation Plan and Evaluation Report*
- *Mitigation Measure M-CP-3: Prepare and Implement a Paleontological Resources Monitoring Program*
- *Mitigation Measure M-CP-4: Treatment of Inadvertently Discovered Human Remains*

Impact C-TR: Project construction could result in cumulative traffic increases and traffic safety hazards on local and regional roads. (Less than Significant with Mitigation)

Overall, localized cumulative construction-related transportation and circulation impacts could occur as a result of cumulative projects that generate increased traffic at the same time and on the same roads as the proposed project, causing increased traffic safety hazards; although the potential for overlap and the amount of overlapping traffic volumes is anticipated to be minimal. The cumulative impact on traffic safety hazards would be potentially significant depending on the amount of overlapping traffic. However, with implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measure M-TR-1: Maintain Traffic Flow on San Bruno Avenue West During the A.M. Peak Hour*
- *Mitigation Measure M-TR-3: Traffic Control Plan*
- *Mitigation Measure C-TR: Assign a SFPUC Water System Improvement Program Projects Construction Coordinator*

Impact C-NO: Project construction could result in a cumulatively considerable contribution to cumulative noise and vibration impacts. (Less than Significant with Mitigation)

For cumulative construction-related noise and vibration impacts, the geographic scope encompasses the sensitive residential receptors adjacent to the construction zones and access routes for the cumulative project sites and the PPSU project site.

If construction activities from the PPSU and GSR projects were to coincide at the Colma or the South San Francisco sites, or if construction activities from the PPSU and HTWTP projects were to coincide at the Millbrae site, it is possible that the cumulative noise levels could exceed the speech interference criterion, which would be a cumulatively significant impact. However, with implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls*

Impact C-AQ: Construction of the proposed project could result in a cumulatively considerable contribution to cumulative air quality impacts associated with criteria pollutant emission and health risks. (Less than Significant with Mitigation)

Regional air quality impacts are by their very nature cumulative impacts. Emissions from past, present and future projects contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts (BAAQMD, 2010b). The cumulative impact of fugitive dust emissions from construction cannot be precisely quantified, and so is considered potentially significant. However, with implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measure M-AQ-1: BAAQMD Basic Construction Measures*

Impact C-UT: Construction of the proposed project could result in a cumulatively considerable contribution to cumulative impacts related to disruption or relocation of utilities. (Less than Significant with Mitigation)

Several of the cumulative projects could result in damage to existing utilities, disruption of utility services, or relocation of utilities. Construction activities for the cumulative projects could result in the temporary disruption of existing water, electrical, or natural gas services, whether as part of a planned service shutdown or as the result of possible physical damage to utility lines during construction.

There would be an overlap in construction schedules for the PPSU and the Regional Groundwater Storage and Recovery (GSR) project at the Colma and South San Francisco sites, and an overlap in Harry Tracy Water Treatment Plant (HTWTP) Long-Term Improvements project with the tree removal at the Millbrae site. Therefore, cumulative impacts related to disruption of utility operations or accidental damage to existing utilities and relocation of regional or local utilities could be significant if the construction of the PPSU project and other cumulative projects overlapped, and damage to or disruption of existing utilities and relocation of utilities were to occur. The PPSU project could have a cumulatively considerable contribution to this potentially significant impact because there could be multiple instances of disruption and relocation during construction. All of the cumulative projects would generate construction-related waste. If all of these wastes were disposed of in offsite disposal facilities, there could be a significant cumulative impact on landfill capacity. However, with implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measure M-UT-1a: Confirm Utility Line Information*
- *Mitigation Measure M-UT-1b: Safeguard Employees from Potential Accidents Related to Underground Utilities*
- *Mitigation Measure M-UT-1c: Notify Local Fire Departments*
- *Mitigation Measure M-UT-1d: Emergency Response Plan; M-UT-1e: Ensure Prompt Reconnection of Utilities*
- *Mitigation Measure M-UT-1f: Coordinate Final Construction Plans with Affected Utilities*

Impact C-BI: Project construction could result in a cumulatively considerable contribution to cumulative impacts on biological resources. (Less than Significant with Mitigation)

The geographic scope for cumulative impacts on biological resources encompasses the project sites and extends for a small area beyond the sites to the jurisdictional waters and developed or previously disturbed habitats in the project area. Because the project would be located entirely within urban areas previously disturbed by development and routine operations and maintenance activities, and because the sites do not provide wildlife movement corridors, the area of potential cumulative impact is relatively limited.

Although the areas to be developed by the cumulative projects are also located in urban areas that are generally previously disturbed, there remains the potential that these projects, in combination with the PPSU project, could result in substantial adverse effects on special-status wildlife species during construction activities due to the potential to affect species habitats. Several of the cumulative projects, including the Groundwater Storage and Recovery (GSR) project and the Harry Tracy Water Treatment Plant (HTWTP) Long-Term Improvement project, would be located in areas that support special-status species. These projects, together with the PPSU project, could result in significant cumulative impacts to species in the region through loss of habitat and/or mortality of species during construction activities.

Construction of the cumulative projects could result in riparian habitat removal and impacts from sediment and polluted runoff. A riparian corridor extends through the HTWTP project site, and several GSR sites are located in riparian habitat. Together with the PPSU project, the cumulative projects could result in significant impacts to riparian habitats.

Construction of the PPSU project in combination with the cumulative projects has the potential to adversely affect jurisdictional waters, including waters of the U.S. and waters of the State. Both the GSR and HTWTP projects would adversely impact jurisdictional waters. Potential impacts could be direct, through modification of creeks, culverts, and indirect, through polluted stormwater runoff during construction. These cumulative impacts could be significant to jurisdictional waters. Construction of the proposed project could degrade water quality through direct modification of the creek culvert at the Colma site, or through other temporary impacts to concrete lined v-ditches at the Colma, San Bruno South, and Millbrae sites. The PPSU project's contribution to degraded water quality could be cumulatively considerable when added to impacts to jurisdictional waters from other SFPUC projects.

Construction of the cumulative projects would result in the removal of trees protected by local ordinances, resulting in inconsistencies with local tree protection ordinances at the South San Francisco and San Bruno North sites. Together with tree removal for several other cumulative projects, including the GSR, HTWTP, and the 599 Cedar Avenue project, impacts from inconsistencies with local tree protection ordinances could result in cumulatively significant impacts. However, with implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measure M-BI-1a: General Protection Measures*
- *Mitigation Measure M-BI-1b: Worker Training and Awareness Program*
- *Mitigation Measure M-BI-1c: Prepare and Implement a Vegetation Restoration Plan*
- *Mitigation Measure M-BI-1d: Minimize Disturbance to Nesting Birds and Raptors*

- *Mitigation Measure M-BI-1e: Preconstruction Surveys for Special-Status Bats and Avoidance and Minimization Measures*
- *Mitigation Measure M-BI-1f: Mitigation for the Mission Blue Butterfly*
- *Mitigation Measure M-BI-1g: Mitigation for San Francisco Dusky-Footed Woodrat Middens*
- *Mitigation Measure M-BI-1h: Mitigation for the California Red-Legged Frog*
- *Mitigation Measure M-BI-2a: Minimize Disturbance to Riparian Habitat;*
- *M-BI-2b: Supplemental Measures for the Vegetation Restoration Plan*
- *Mitigation Measure M-BI-3: Avoidance and Protection Measures for Jurisdictional Water Bodies*
- *Mitigation Measure M-BI-4: Replacement of Trees to be Removed*
- *Mitigation Measure M-HY-1a: Preparation and Implementation of a SWPPP*

Impact C-GE: Project construction could result in a cumulatively considerable contribution to cumulative impacts related to geology and soils. (Less than Significant with Mitigation)

The cumulative projects would require ground disturbance, which could result in soil erosion and loss of topsoil. This would be greatest at projects involving new construction. The PPSU project could contribute to this potential impact during project construction. Depending on the extent of erosion and removal of topsoil, these projects could result in a significant cumulative impact. The PPSU project could have a cumulatively considerable contribution to this potentially significant impact because project excavation could result in substantial soil erosion during the rainy season, and the discharge and dewatering of water from the pipelines during construction could result in downstream erosion. Additionally, topsoil would be removed at all sites. With implementation of project level mitigation measures, the PPSU project would not have a cumulatively considerable contribution.

- *Mitigation Measure M-HY-1: Preparation and Implementation of a SWPPP*
- *Mitigation Measure M-BI-1a: General Protection Measures*

Impact C-HY: Project construction could result in a cumulatively considerable contribution to cumulative impacts on hydrology and water quality. (Less than Significant with Mitigation)

The cumulative projects could result in temporary and permanent impacts to water quality, and potentially exceed applicable water quality standards. Temporary impacts may result from land clearing, site disturbance, and grading associated with construction activities. Permanent water quality impacts could result from stormwater runoff from newly constructed impervious surfaces associated with developments.

The Regional Groundwater Storage and Recovery (GSR) project includes drilling of new groundwater wells within the vicinity of the PPSU Colma and South San Francisco sites and the common staging area. Both the GSR project and the PPSU project have the potential to degrade water quality as a result of construction-related soil erosion, discharge of dewatering water, or accidental discharges of hazardous materials into receiving water bodies. Together, these projects could contribute to significant cumulative construction-related impacts from violations of water

quality standards and discharge requirements.With the implementation of project level mitigations, the project's residual contribution to surface water quality impacts would not be cumulatively considerable.

- *Mitigation Measure M-HY-1: Preparation and Implementation of a SWPPP*

Impact C-HZ: Construction of the proposed project could result in a cumulatively considerable contribution to cumulative impacts related to hazards and hazardous materials. (Less than Significant with Mitigation)

Cumulative impacts related to exposure to hazards and hazardous materials in soil and groundwater could occur if the cumulative project construction activities entailed the excavation and/or groundwater dewatering within contaminated areas. In addition, construction of the cumulative projects could result in accidental release of hazardous construction materials. These releases could occur in proximity to schools. Therefore, cumulative impacts related to the accidental release of hazardous construction chemicals into the environment or upset of contaminated soils or groundwater and release of hazardous materials during construction of the PPSU project and the GSR project is considered potentially significant.

The construction of the PPSU project would use hazardous materials, including petroleum fuels and lubricants for earth-moving equipment, and flammable gases for welding. There is a low potential to encounter hazardous materials in the soil and groundwater during construction activities for the PPSU project, because the environmental database reviews completed for the project did not identify any permitted hazardous materials uses or environmental cases in the vicinity that are likely to have adversely impacted soil and groundwater quality. However, unknown hazardous soils or groundwater could be excavated or released from the sites, or accidents could result in a release of hazardous materials used during construction. Therefore, the PPSU project together with the GSR could result in a significant cumulative impact.

The proposed project's contribution to cumulative impacts pertaining to hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be reduced with the implementation of project level mitigation measures. Therefore, the project's contribution to the identified cumulative impacts would not be cumulatively considerable.

- *Mitigation Measure M-HZ-2a: Prepare and Implement a Hazardous Material Handling and Disposal Plan*
- *Mitigation Measure M-HZ-2b: Develop and Implement a Hazardous Material Business Plan*
- *Mitigation Measure M-HZ-2c: Develop and Implement a Health and Safety Plan*
- *Mitigation Measure M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan*

IV. Significant Impacts That Cannot Be Avoided or Reduced to a Less-Than-Significant Level

Project Impacts

Based on substantial evidence in the whole record of these proceedings, the SFPUC finds that, where feasible, changes or alterations have been required or incorporated into the project to reduce the significant environmental impacts as identified in the Final EIR and listed below. The SFPUC finds that the mitigation measures in the Final EIR and described below are appropriate, and that changes have been required in or incorporated into the project that, pursuant to Public Resources Code section 21002 and CEQA Guidelines section 15091, may substantially lessen, but do not avoid (i.e., reduce to less than significant levels) the potentially significant environmental effect associated with implementation of the project. The SFPUC adopts all of the mitigation measures proposed in the Final EIR and set forth in the MMRP, attached hereto as Attachment B. The SFPUC further finds, however, for the impacts listed below, despite implementation of mitigation measures, the effects remain significant and unavoidable. Based on the analysis contained within the Final EIR, other considerations in the record, and the standards of significance, the SFPUC finds that because some aspects of the project could cause potentially significant impacts for which feasible mitigation measures are not available to reduce the impact to a less-than-significant level, the impacts are significant and unavoidable.

The SFPUC determines that the following significant impacts on the environment, as reflected in the Final EIR, are unavoidable, but under Public Resources Code Section 21081(a) (3) and (b), and CEQA Guidelines sections 15091(a) (3), 15092(b) (2) (B), and 15093, the SFPUC determines that the impacts are acceptable due to the overriding considerations described in Section VI below. This finding is supported by substantial evidence in the record of this proceeding.

Impact NO-1: Daytime construction activities could result in substantial temporary increases in ambient daytime noise levels that could interfere with nearby land uses. (Significant and Unavoidable with Mitigation)

Project-related construction activities would result in temporary noise increases at sensitive receptors located adjacent to or near the project sites. Construction noise levels would vary at any given receptor depending on the construction activity, equipment type, duration of use, distance between the source and receptor, and the presence or absence of barriers between the noise source and the receptor.

At the South San Francisco. North San Bruno, South San Bruno, and Millbrae project sites, noise from construction activities would exceed the daytime noise significances threshold even with implementation of mitigation measures, therefore, the noise levels would be *significant and unavoidable with mitigation*.

- *Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls*

Impact NO-2: Nighttime construction and pipeline dewatering activities could result in substantial temporary increases in ambient nighttime noise levels that could interfere with nearby land uses. (Significant and Unavoidable with Mitigation)

Construction at the San Bruno North site is anticipated to require nighttime activities to avoid traffic impacts during peak hours. Noise from nighttime construction activities would exceed the sleep interference threshold at the seven closest residential receptors along Cedarwood Court and the eight closest residential receptors along Pepper Drive during the mobilization and excavation and restoration construction phases, a potentially significant impact. Even with implementation of

Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls construction-related noise levels could still exceed the sleep interference threshold. Therefore, the mitigated noise levels would be *significant and unavoidable with mitigation.*

- *Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls*

Impact NO-3: Construction activities could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance. (Significant and Unavoidable with Mitigation)

The majority of equipment proposed for use in the project construction exceeds the City of San Bruno nighttime ordinance limit of 66 dBA at a distance of 50 feet. Even with implementation of Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls, which requires noise control measures and noise barrier walls as part of a Noise Control Plan, construction-related noise levels would exceed the nighttime ordinance limit by up to 4 dB. Therefore, construction-related noise levels would be *significant and unavoidable with mitigation*.

In the City of Millbrae Noise Ordinance, construction activities are limited between 7:30 a.m. and 7 p.m. during weekdays, on Saturdays between 8 a.m. and 6 p.m., and on Sundays and holidays between 9 a.m. and 6 p.m. However, because the proposed pipeline dewatering activities would extend over 24-hour periods, these activities would occur outside of the City of Millbrae Noise Ordinance time limits. Construction occurring outside of the ordinance time limits would be inconsistent with the ordinance, and therefore could result in a significant noise impact. Even with implementation of Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls, which requires the SFPUC to reduce pipeline dewatering noise levels to the speech interference and sleep interference thresholds, this impact would remain *significant and unavoidable with mitigation.*

- *Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls*
- *Mitigation Measure M-NO-3a: Limit Hours of Construction at Colma Site*
- *Mitigation Measure M-NO-3b: Limit Hours of Construction at Millbrae Site*

Impact NO-4: Construction activities could result in exposure of persons or structures to generation of excessive groundborne vibration. (Significant and Unavoidable with Mitigation)

The use of pile drivers, vibratory rollers/compactors, and heavy trucks during project construction would generate groundborne vibration in the vicinity of the activity. Residential receptors near the San Bruno North site could experience vibration levels in exceedence of the significance threshold a potentially significant impact. Implementation of Mitigation Measure M-NO-4: Develop and Implement Vibration Planning, Monitoring, and Reporting, which requires vibration control measures to the extent feasible and prohibits vibratory rolling and pile driving activities during nighttime hours as part of a Vibration Control Plan, would reduce vibration impacts but not necessarily to a less-than-significant level. Because this exceedence, the nighttime vibration impact would be *significant and unavoidable with mitigation*.

- *Mitigation Measure M-NO-4: Develop and Implement Vibration Planning, Monitoring, and Reporting*

WSIP Impacts

The Project is a component of the WSIP and, therefore, will contribute to the significant and unavoidable impacts caused by the WSIP water supply decision. Three significant and unavoidable impacts were identified and discussed in this Commission's Resolution No. 08-0200 related to the WSIP water supply decision: ***Impact 5.4.1-2-*** *Stream Flow: Effects on flow along Alameda Creek below the Alameda Creek Division Dam*; ***Impact 5.5.5-1****-Fisheries: Effects on fishery resources in Crystal Springs reservoir (Upper and Lower);* and ***Impact 7-1****-Indirect growth inducing impacts in the SFPUC service area*. Mitigation measures that were proposed in the PEIR were adopted by this Commission for these impacts; however, the mitigation measures could not reduce all the impacts to a less than significant level, and these impacts were determined to be significant and unavoidable. This Commission has already adopted the mitigation measures proposed in the PEIR to reduce these impacts when it approved the WSIP in its Resolution No. 08-0200. This Commission also adopted a Mitigation Monitoring and Reporting Program as part of that approval. The findings regarding the three impacts and mitigation measures for these impacts set forth in Resolution No. 08-0200 are incorporated into these findings by this reference, as though fully set forth in these CEQA Findings.

Subsequent to the certification of the PEIR, the Planning Department has conducted more detailed, site-specific review of two of the significant and unavoidable water supply impacts identified in the PEIR. In the case of ***Impact 5.5.5.-1***, the project-level fisheries analysis in the Lower Crystal Springs Dam Improvement project Final EIR modifies the PEIR impact determination based on more detailed site-specific data and analysis and determined that impacts on fishery resources due to inundation effects would be less than significant. Project-level conclusions supersede any contrary impact conclusions in the PEIR. The SFPUC adopted CEQA Findings with respect to the approval of the Lower Crystal Springs Dam Improvement project in Resolution No. 10-0175. The CEQA Findings in Resolution No. 10-0175 related to the impacts on fishery resources due to inundation effects are incorporated into these findings by this reference, as though fully set forth in these CEQA Findings.

In the case of ***Impact 5.4.1-2***, the project level analysis in the Calavaras Dam Replacement project Final EIR modifies the PEIR determination and concludes that the impact related to stream flow along Alameda Creek between the diversion dam and the confluence with Calaveras Creeks (PEIR Impact 5.4.1-2) will be less than significant based on more detailed, site-specific modeling and data. Project-level conclusions supersede any contrary impact conclusions in the PEIR. The SFPUC adopted CEQA Findings with respect to the approval of the Calaveras Dam Improvement project in Resolution No. 11-0015. The CEQA Findings in Resolution No. 11-0015 related to the impacts on fishery resources due to inundation effects are incorporated into these findings by this reference, as though fully set forth in these CEQA Findings.

The remaining significant and unavoidable water supply impact listed in Resolution No. 08-0200 is as follows, relating to ***Impact 7-1***:

Potentially Significant and Unavoidable WSIP Water Supply and System Operation Impact

- **Growth**: Indirect growth-inducement impacts in the SFPUC service area.

V. Evaluation of Project Alternatives

This Section describes the project as well as alternatives the reasons for approving the project and for rejecting the alternatives. CEQA mandates that an EIR evaluate a reasonable range of alternatives to the project or the project location that generally reduce or avoid potentially significant impacts of the project. CEQA requires that every EIR also evaluate a "No Project" alternative. Alternatives provide a basis of comparison to the project in terms of their significant impacts and their ability to meet project objectives. This comparative analysis is used to consider reasonable, potentially feasible options for minimizing environmental consequences of the project.

A. Reasons for Approval of the Project

The overall goals of the WSIP for the regional water system are to:

- Maintain high-quality water and a gravity-driven system
- Reduce vulnerability to earthquakes
- Increase delivery reliability
- Meet customer water supply needs through 2018
- Enhance sustainability
- Achieve a cost-effective, fully operational system

The project, as described herein and consisting of the components set forth in the Final EIR, contributes to achievement of these goals by improving the seismic reliability of transmission pipelines between HTWTP and the Capuchino, Baden, and San Pedro Valve Lots in the event of a major earthquake on the San Andreas Fault. Specific objectives of the Project are to:

- Upgrade segments of the SAPL2, SAPL3, and SSBPL to meet current seismic standards in locations where they cross the Serra Fault, so that they can withstand the ground displacements potentially caused by a fault offset. This is intended to preserve water flow from the HTWTP to downstream facilities after a major San Andreas earthquake, and to achieve WSIP seismic reliability Level of Service goals.

- Minimize interruptions of water delivery during and following a seismic event by minimizing seismic vulnerabilities at the Serra Fault crossing locations, and by minimizing vulnerabilities at the liquefaction-susceptible zones.

- Reduce the physical, social, and economic impacts associated with the potential rupture of the existing SAPL2, SAPL3, and SSBPL during a major earthquake.

B. Alternatives Rejected and Reasons for Rejection

The Commission rejects the alternatives set forth in the Final EIR and listed below because the Commission finds that there is substantial evidence, including evidence of economic, legal, social, technological, and other considerations described in this section in addition to those described in Section VI below under CEQA Guidelines 15091(a)(3), that make infeasible such Alternatives. In making these determinations, the Commission is aware that CEQA defines

"feasibility" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors." The Commission is also aware that under CEQA case law the concept of "feasibility" encompasses (i) the question of whether a particular alternative promotes the underlying goals and objectives of a project, and (ii) the question of whether an alternative is "desirable" from a policy standpoint to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.

Alternative 1: No Project

The No Project Alternative includes those activities that would reasonably be expected to occur in the foreseeable future if the proposed project were not approved. These activities include the following:

- Continued operation and maintenance of SAPL2, SAPL3, and SSBPL as they are currently operated and maintained; and
- Emergency repairs to SAPL2, SAPL3, and SSBPL in the event of a pipeline failure resulting from a major earthquake or other unforeseeable event.

In the absence of a major earthquake along the San Andreas Fault, future operations and maintenance under the No Project Alternative would be the same as under existing conditions. In the event of pipeline failure resulting from a seismic event or other cause, SFPUC would use existing valves in the project vicinity to shut off flow of water to failed pipelines. Pipeline shutdown would disrupt service to customers for the duration of the emergency pipeline repairs. Depending on the severity of the rupture, the construction period for emergency repairs may be shorter or longer than that for the proposed project. Emergency pipeline repairs would require approximately 2 weeks for construction of temporary piping, and an additional 3 to 5 months for construction activities associated with permanent repairs to the existing pipelines. Emergency repairs could require 24-hour construction to restore water service, necessitating nighttime and weekend construction.

In the absence of a major earthquake along the San Andreas Fault, the No Project Alternative would result in fewer and less severe impacts compared to the proposed project. However, in the probable event of rupture of SAPL2, SAPL3, and/or SSBPL during a seismic event, the No Project Alternative would likely result in greater impacts than the proposed project. The Working Group on California Earthquake Probabilities has estimated that during the 30-year time period between 2003 and 2032, there is a 21 percent probability of a large earthquake (magnitude 7.0 or higher) occurring on the San Francisco Peninsula segment of the San Andreas Fault earthquake. Because of the likelihood of occurrence, such a seismic event is assumed to occur.

Pipeline failure would release water and result in localized flooding, damage to adjacent infrastructure and residences, public safety hazards, and a disruption in water delivery services to downstream SFPUC customers. Flooding could result in greater impacts related to land use disruption, closure or disruption of recreational facilities, soil erosion, damage to previously unidentified archaeological and paleontological resources, impacts to biological and hydrological resources from discharge of chloraminated water, and damage to utilities (including service disruption). In addition, emergency pipeline repair activities could result in greater impacts than the proposed project because some mitigation that could reduce construction-related impacts may not be feasible under this alternative due to the emergency nature of repairs. Although the construction period could be shorter under the No Project Alternative, repairs would likely

require 24-hour and weekend construction, resulting in greater noise-related impacts on nearby residences than under the proposed project and impacts from nighttime lighting for emergency construction. Removal of debris associated with pipeline failure and flooding would result in greater truck trips. Loss of water supply would adversely affect the provision of services on a normal service basis and for fire-fighting as a result of a seismic event. Acute demand for emergency response services would be required due to pipeline failure and flooding after a seismic event.

The Commission rejects the No Project Alternative because it would not meet any of the project objectives nor any of the WSIP objectives. Overall, the No Project Alternative would also likely result in greater environmental impacts than would the proposed project due to the high probability of pipeline failure caused by an earthquake on the San Andreas fault.

Alternative 2 – Sliplining Alternative

The Sliplining Alternative is a design alternative that entails installation of new smaller-diameter pipe within the existing pipe to improve the seismic reliability of the pipeline. The Sliplining Alternative would be implemented at selected locations where the pipe is susceptible to failure from seismic events at project sites where the proximity of the proposed project construction to nearby sensitive receptors would result in significant construction-related impacts, which are: South San Francisco, San Bruno South, and Millbrae sites. Under this alternative, the PPSU project as proposed would be implemented at the Colma and San Bruno North sites.

Sliplining would meet some of the project objectives, but would provide a lower seismic reliability than the proposed PPSU project because the welds for the liner pipe are considered to have a lower strength compared to new construction, where both sides of the pipe are accessible for welding. If sliplining were used, the existing pipe joints — riveted joints along SAPL2 and pre-stressed concrete cylinder pipe joints along SAPL3 — would concentrate strain due to seismic offset at points of connection to existing pipe.

Under this method, a smaller-diameter new pipe is pushed or pulled through the existing pipe. Compared to the proposed project, which would entail excavation of the existing pipeline along the entire section to be replaced at these sites, sliplining would require less ground disturbance since pits would be excavated where the pipeline alignment changes. A 48-inch-diameter pipeline would be sliplined inside the existing segments of SAPL2, SAPL3 and SSBPL at the South San Francisco, San Bruno South, and Millbrae sites. The Sliplining Alternative would occur during planned operational shutdowns, similar to the proposed project. The construction duration at the project sites would be the same or slightly less than the proposed PPSU project construction duration.

Because the Sliplining Alternative would require substantially less off-haul of soils and construction debris due to the smaller amount of excavation required and because the existing pipelines would not be removed, truck trips would range from approximately 10 percent of the proposed project's estimated truck trips at the South San Francisco and San Bruno South sites to 30 percent of estimated truck trips at the Millbrae site.

Other features of this alternative would be similar to the proposed project, including water discharges and blow-off locations, access routes, and staging areas. Additionally, future operations and maintenance activities would be similar to those for the proposed project.

Under the Sliplining Alternative, impacts at the Colma and San Bruno North sites would be similar to the proposed project. Many of the potential impacts under the proposed project would be reduced at the South San Francisco, San Bruno South, and Millbrae sites. Although the severity or intensity of impacts would be reduced, mitigation measures similar to those identified for the proposed project would be required for each impact area, and the level of impacts would not be diminished such that potentially significant and unavoidable impacts would become less than significant with mitigation or that significant but mitigable impacts would become less than significant (without mitigation).

Impacts related to biological resources, including impacts from tree removal required at the South San Francisco and Millbrae sites would be similar to those identified under the proposed project because the project area, including the construction zone and staging areas would be the same as the proposed project. Additionally, impacts related to geology and soils would on the whole be similar to the proposed project; impacts related to soil erosion would be reduced but impacts related to surface fault rupture, ground shaking, ground failure, and landslides would increase under this alternative. However, many other construction-related impacts would be reduced because of differences in the sliplining construction method (compared to the open trench method that would be used for the proposed project). Because substantially less soils would be excavated and subsequently less off-haul of both spoils and construction debris, such as pipe materials, would be required for this alternative, impacts associated with excavation and truck trips would be reduced. Additionally, the slightly shorter construction duration at the South San Francisco and San Bruno South sites would result in reduced duration of impacts at these sites. Generally, impact levels would be the same or less than the proposed project, and in many cases, the intensity or severity of the impact would be reduced compared to the proposed project. However, because the reductions would be limited, no change would result to the overall significance determination for any impact (i.e. to reduce a significant and unavoidable impact to less than significant with mitigation, or to reduce a less than significant with mitigation impact to less than significant without mitigation).

Although this alternative would meet some of the SFPUC's project objectives, the Commission rejects this alternative as infeasible because it would have a lower seismic reliability than the project and would not result in a substantial environmental improvement as compared to the project.

VI. Statement of Overriding Considerations

Pursuant to CEQA section 21081 and CEQA Guidelines Section 15093, the Commission hereby finds, after consideration of the Final EIR and the evidence in the record, that each of the specific overriding economic, legal, social, technological and other benefits of the project as set forth below independently and collectively outweighs the significant and unavoidable impacts and is an overriding consideration warranting approval of the project. Any one of the reasons for approval cited below is sufficient to justify approval of the project. Thus, even if a court were to conclude that not every reason is supported by substantial evidence, the Commission will stand by its determination that each individual reason is sufficient. The substantial evidence supporting the various benefits can be found in the preceding findings, which are incorporated by reference into this section, and in the documents found in the Record of Proceedings, as defined in Section I.

On the basis of the above findings and the substantial evidence in the whole record of this proceeding, the Commission specifically finds that there are significant benefits of the project in spite of the unavoidable significant impacts, and therefore makes this Statement of Overriding

Considerations. The Commission further finds that, as part of the process of obtaining project approval, all significant effects on the environment from implementation of the project have been eliminated or substantially lessened where feasible. All mitigation measures proposed in the Final EIR for the project are adopted as part of this approval action. Furthermore, the Commission has determined that any remaining significant effects on the environment found to be unavoidable are acceptable due to the following specific overriding economic, technical, legal, social, and other considerations.

The project will have the following benefits:

- The project will preserve water flow from the HTWTP to downstream facilities after a major San Andreas earthquake and achieve WSIP seismic reliability Level of Service goals.

- The project will minimize interruptions of water delivery during and following a seismic event by minimizing seismic vulnerabilities at the Serra Fault crossing locations, and by minimizing vulnerabilities at the liquefaction-susceptible zones.

- The project will reduce the physical, social, and economic impacts associated with the potential rupture of the existing SAPL2, SAPL3, and SSBPL during a major earthquake.

In addition, the project will further the WSIP's goals and objectives. In particular, this project helps to implement the following benefits of the WSIP:

- Implementation of facility improvement projects will reduce vulnerability to earthquakes. Improvements are designed to meet current seismic standards. The regional water system is a critical and vulnerable link in the City and wholesale customers ability to survive after a major earthquake and to maintain access to critically needed water supplies. The SFPUC will be able to meet the fundamental and most pressing needs of the water system— to improve the seismic safety and reliability of the water system as a means of saving human life and property under a catastrophic earthquake scenario or even a disaster scenario not rising to the level of catastrophy. Effecting the necessary repairs and improvements to assure the water system's continued reliability, and developing it as part of a larger, integrated water security strategy, is critical to the Bay Area's economic security, competitiveness and quality of life.

- The water system will maintain a high quality water system.

- Improvements are designed to meet applicable federal and state water quality requirements.

- The WSIP will increase delivery reliability and improve the ability to maintain the water system, providing operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service, operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages, and operational flexibility and system capacity to replenish local reservoirs as needed. In order to implement a feasible asset management program in the future that will provide continuous maintenance and repairs to facilities, the regional water system requires redundancy (i.e., backup) of some critical facilities necessary to meeting day-to-day customer water supply needs. Without adequate redundancy of critical facilities, the

SFPUC has limited operational flexibility in the event of an emergency or a system failure as well as constraints on conducting adequate system inspection and maintenance.

- The WSIP will achieve a cost effective, fully operational system, ensuring cost-effective use of funds,maintaining a gravity-driven system.

Having considered these benefits, including the benefits discussed in Section I above, the Commission finds that the benefits of the project and the project's furtherance of the WSIP goals and objectives outweigh the unavoidable adverse environmental effects, and that the adverse environmental effects are therefore acceptable.

Attachment B

PENINSULA PIPELINES SEISMIC UPGRADE PROJECT (SF Environmental Planning Case No. 2011.0123E) – MITIGATION MONITORING AND REPORTING PROGRAM – FINAL

Impact No.	Impact Summary	Adopted Mitigation Measures	Monitoring and Reporting Program			
			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
Land Use and Land Use Planning						
LU-1	Project construction could have a substantial temporary direct or indirect impact on the existing character of the vicinity, or could substantially impact or disrupt existing land uses or land use activities.	**Mitigation Measure M-LU-1a: Notice of Construction Activities** This mitigation measure applies to all the project sites. The following notification procedures shall be implemented prior to construction: 1. The SFPUC shall provide advance notification to businesses, property owners, facility managers, and residents of adjacent areas potentially affected by the PPSU project about the nature, extent, and duration of construction activities, at least 1 week prior to construction. The SFPUC or its contractor will coordinate with the City of San Bruno to agree on a public notification process and notification boundaries in San Bruno. The SFPUC shall also provide interim updates to these parties during periods of active construction to inform them of the status of the construction activities and schedule. Notices shall be sent to sensitive receptors and affected adjacent properties identified below: • **Colma Site** – Kohl's Department Store; Home Sweet Home Assisted Living Facility if occupied; Creekside Villas, residential units in front of Kohl's Department Store to the East; and Cypress Lawn Memorial Cemetery; • **South San Francisco Site –**Residences adjacent to the construction zone along Arroyo Drive; Clubview Apartments; and California Golf Club of San Francisco; • **San Bruno North Site** – Residences adjacent to the construction zone along Cedarwood Court and Pepper Drive; • **San Bruno South Site** – Park Plaza Apartments and Shelter Creek Condominiums; Residences adjacent to the construction zone along Courtland Drive; Peninsula High School and other uses at the former Crestmoor High School campus; Peninsula High School Athletic Fields; and San Bruno Chinese Church; and • **Millbrae Site** – Green Hills Country Club; Meadows Elementary School; Residences along Ridgewood Drive; Residences adjacent to the construction zone along Ridgewood Drive, Hacienda Way, Helen Drive, Banbury Lane; Millwood Drive and Barcelona Drive; and Glen Oaks and Millbrae Montessori Schools; 2. The SFPUC shall coordinate with managers of facilities including, but not limited to, Kohl's Department Store, San Bruno Chinese Church, Peninsula High School, and the Green Hills Country Club to minimize disruptions to facility operations and activities, to the extent feasible. 3. Should weekend work be necessary, the SFPUC shall notify adjacent properties, including reasonable advance notification to the businesses, owners, and residents of adjacent areas potentially affected by the proposed project, and interim updates shall be provided.	1) SFPUC Communications 2) SFPUC Communications/ CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Provide advance notification to businesses, property owners, facility managers, and residents. 2) Coordinate with facility managers to ensure that construction is scheduled in times that would have the least impact on these facilities. Provide advance notification of weekend work. Provide interim updates about construction to businesses, property owners, facility managers, and residents.	1) Prior to construction (at least 1 week) 2) Pre-construction/ construction

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			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
LU-1 (cont.)		**M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts** This mitigation measure applies to South San Francisco, San Bruno North, San Bruno South, and Millbrae sites only. The SFPUC or its contractor shall provide 14-day advance notice by mail or hand delivery to all residents, tenants, and/or property owners in those homes listed below as being potentially subject to significant and unavoidable noise impacts, even after administrative and source controls are implemented. • **South San Francisco Site –** Arroyo Drive (address numbers 105, 107 and 108); • **San Bruno North Site –** Cedarwood Court (address numbers 1790, 1791, 1800, 1801, 1820, 1821, 1840, and 1841); and Pepper Drive (address numbers 763, 769, 773, 779, 783, 789, 793, and 795); • **San Bruno South Site –** Courtland Drive (address numbers 300, 306, 310, 316, 320, 326, 330, 336, 340, 350, 360, and 370); Shelter Creek Condominiums Buildings 4A, 4B, and 4D; and Park Plaza Apartments; and • **Millbrae Site –** Hacienda Way (address numbers 859, 869, 873, 877, 881, 885, 889, 913, and 917); Ridgewood Drive (address numbers 1078, 1086, 1094, 1100, 1101, 1106, 1110, 1116, 1120, 1126, and 1130); and Banbury Lane (address number 971). The notice will state the construction location, anticipated activities, and schedule, including whether nighttime construction is proposed. The notice will provide information about anticipated construction-related noise impacts and provide suggestions for avoiding or reducing exposure to such impacts (e.g., planning alternative schedules, closing windows facing the planned construction sites). The SFPUC shall identify and provide a public liaison person before and during construction to respond to the concerns of neighboring property owners. Procedures for contacting the public liaison officer via a toll-free telephone number, email, or in person will be included in the notices. Prior to construction, the SFPUC communications manager, resident engineer, and construction manager shall develop and review procedures for receiving and responding to questions and complaints.	1) SFPUC Communications 2) SFPUC Communications/ CM Team 3) SFPUC Communications/ CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Provide advance notification to residents and/or property owners. 2) Identify a public liaison. Develop and review procedures for receiving and responding to questions and complaints. 3) Provide interim updates and respond to complaints.	1) Prior to construction (at least 14 days) 2) Pre-construction 3) Construction
		Implement Mitigation Measures M-AE-2 (Site-Specific Construction Lighting Plan), M-NO-1 (Prepare and Implement Administrative and Source Controls), M-NO-3a (Limit Hours of Construction at Colma Site), M-NO-3b (Limit Hours of Construction at Millbrae Site), M-NO-4 (Develop and Implement Vibration Planning, Monitoring, and Reporting), M-TR-3 (Traffic Control Plan), M-AQ-1 (BAAQMD Basic Construction Measures), and M-RE-1 (Coordination with Green Hills Country Club Facility Managers).	See respective mitigation measures			
C-LU	Project construction could result in a cumulatively considerable contribution to cumulative impacts on existing land uses.	Implement Mitigation Measures M-LU-1a (Notice of Construction Activities) and M-LU-1b (Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts)	See respective mitigation measures			

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Impact No.	Impact Summary	Adopted Mitigation Measures	Monitoring and Reporting Program			
			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
Aesthetics						
AE-2	Project construction could result in significant impacts related to a new source of substantial light or glare.	**M-AE-2: Site-Specific Construction Lighting Plan** This mitigation measure applies to the San Bruno North site only. The SFPUC shall require the contractor to develop and implement a site-specific nighttime lighting plan. A qualified lighting professional shall prepare the plan, which shall specify lighting sources for nighttime operations, and require that lighting be shielded and directed specifically onto work areas to minimize light spillover. The plan shall also provide for light source monitoring to ensure that feasible adjustments are made as necessary to provide maximum shielding during all phases of construction. The contractor shall submit the plan to the SFPUC for review and approval prior to commencing nighttime construction operations, at which time the plan shall be implemented continuously until the end of nighttime construction.	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC CMB 3) SFPUC BEM	1) Ensure that contract documents include requirement for contractor to develop lighting plan requirements. 2) Ensure that contractor prepares lighting plan and submits to SFPUC for review and approval. 3) Monitor to ensure that the contractor implements plan requirements. Report noncompliance and ensure corrective action.	1) Design 2) Prior to nighttime construction 3) Construction
		Implement Mitigation Measure M-LU-1b (Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts).	See Mitigation Measure M-LU-1b			
Cultural and Paleontological Resources						
CP-2	Project construction could cause a substantial adverse change in the significance of a historical or unique archaeological resource.	**M-CP-2a: Distribute "ALERT" Sheet** This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only. At these sites, there is a potential for the inadvertent discovery of archaeological resources because all require excavation into previously undisturbed soils. To avoid any potential adverse effects on accidentally discovered buried cultural resources, as defined in CEQA Guidelines Section 15064.5(a)(c), the SFPUC shall distribute the San Francisco Planning Department's archaeological resource "ALERT" sheet to the project prime contractor; to any subcontractors (including firms subcontracted to perform demolition, excavation, grading, foundation, and pile driving); and/or to any utilities firms involved in any and all soil-disturbing activities within the PPSU C-APE. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The SFPUC shall provide the Environmental Review Officer (ERO) with the sign-in sheet from the responsible parties (i.e., prime contractor, subcontractor[s], and utilities firm) confirming that all field personnel have received copies of the ALERT sheet. Should any indication of an archeological resource be encountered during any soil-disturbing activity, SFPUC and/or the contractor shall immediately suspend the soil-disturbing activities within 50 feet of the discovery, and shall notify the ERO immediately. Ground-disturbing activities in the vicinity of the discovery shall remain suspended until the ERO has determined what additional measures should be undertaken.	1) SFPUC EMB 2) CM Team 3) CM Team (qualified archaeologist)	1) SFPUC BEM 2) SFPUC BEM/ERO 3) SFPUC BEM	1) Ensure that the contract documents include measures related to archaeological discoveries. 2) Ensure that all personnel attend environmental training prior to beginning work, receive the ALERT sheet, and sign the training sign-in sheet. Maintain file of signature sheets for submittal to ERO. Monitor to ensure that the contractor implements measures in contract documents including halting activities within 50 feet of discovery. Report noncompliance and ensure corrective action. 3) Evaluate the potential discovery and advise the ERO as to the significance of the discovery.	1) Design 2) Pre-construction 3) Construction

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Impact No.	Impact Summary	Adopted Mitigation Measures	Monitoring and Reporting Program			
			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
CP-2 (cont.)		If an archaeological resource is present, the archaeological monitor retained for the project (see **Mitigation Measure M-CP-2b**) shall identify and evaluate the archaeological resource. The archaeological monitor shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the SFPUC. These measures might include preservation in situ of the archaeological resource; or an archaeological evaluation program (see **Mitigation Measure M-CP-2c**).				
		M-CP-2b: Conduct Archaeological Monitoring in Accordance with Approved Archaeological Monitoring Plan This mitigation measure applies to the Colma, South San Francisco, and San Bruno South sites only. At these sites, portions of the C-APE are of elevated archaeological sensitivity. The SFPUC will retain a qualified archaeologist meeting the Secretary of the Interior's professional standards for archaeology and, as necessary, a Native American monitor to be present during specific ground disturbing activities at specific locations within the Colma, South San Francisco, and San Bruno South sites as stipulated within the Archaeological Monitoring Plan (AMP) to be prepared for the project (URS, 2012a). The monitoring shall be conducted in accordance with the approved AMP. Archaeological monitoring is not required at the Millbrae site, given the low archaeological sensitivity of the soils occurring within that portion of the C-APE.	1) SFPUC EMB 2) CM Team (qualified archaeologist)	1) SFPUC BEM 2) SFPUC BEM	1) Ensure that contract documents include requirement that contractor implement measures related to archaeological monitoring. 2) Monitor ground disturbing activities in compliance with the Archaeological Monitoring Plan.	1) Design 2) Pre-construction/ Construction
		M-CP-2c: Prepare and Comply with an Archaeological Evaluation Plan and Evaluation Report This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only. In the event archaeological resources are inadvertently exposed during any project-related construction, all ground-disturbing work within 50 feet of the discovery shall immediately cease, and the SFPUC Project Manager and the ERO shall be notified immediately. In consultation with the SFPUC, the ERO, and the San Francisco Planning Department's Environmental Planning Division archaeologist or Designee, the monitoring archaeologist shall prepare an Archaeological Evaluation Plan (AEP) consistent with the requirements of the San Francisco Planning Department, Environmental Planning Division (EP) WSIP Archaeological Guidance No. 5. The AEP shall create a program to determine the potential of the expected resource to meet the California Register criteria—particularly Criterion 4, the resource's potential to address important research questions identified in the AEP—and the archaeologist shall submit this plan to the ERO for approval. The archaeologist shall then conduct an evaluation consistent with the ERO-approved AEP. The methods and findings of the evaluation shall be presented in an Archaeological Evaluation and Effects Report consistent with EP WSIP Archaeological Guidance No. 6, which shall be submitted to the ERO upon completion.	1) SFPUC BEM (qualified archaeologist) 2) SFPUC BEM (qualified archaeologist)	1) SFPUC BEM/ERO 2) SFPUC BEM/ERO	1) Prepare an Archeological Evaluation Plan for Review and Approval by ERO. 2) Conduct evaluation consistent with the ERO-approved AEP and document findings in an Archeological Evaluation and Effects Report that is to be submitted to the ERO.	1) Construction 2) Construction

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			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
CP-2 (cont.)		Based on the conclusions of the Archaeological Evaluation and Effects Report, the Environmental Planning Division Archeologist or Designee shall determine if the project will adversely affect a CEQA-significant archaeological resource. If the project will have an adverse effect on such a resource, an Archaeological Research Design and Treatment Plan shall be prepared by the archaeologist and submitted to the ERO. The Archaeological Research Design and Treatment Plan shall be prepared consistent with the EP (formerly MEA) WSIP Archaeological Guidance No. 7. Once approved by the ERO, a data-recovery investigation and/or other treatment shall be conducted by the archaeologist.				
CP-3	Project construction could result in a substantial adverse effect by directly or indirectly destroying a unique paleontological resource or site.	**M-CP-3: Prepare and Implement a Paleontological Resources Monitoring Program** This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only. Prior to the initiation of any site preparation or start of construction, SFPUC shall retain a qualified professional paleontologist or a California Professional Geologist with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (SVP, 1995), to carry out a paleontological resources training program for construction workers and to develop a paleontological monitoring program, except at the San Bruno North site. The SFPUC shall require the paleontologist to be on call throughout the duration of ground-disturbing activities. At a minimum, the monitoring program shall include: **Preparation of a Paleontological Monitoring Plan.** Based on the results of the paleontological investigation completed for the PPSU project (URS, 2012b), the volume and depth of proposed soil excavations, and professional judgment, the paleontologist shall identify the specific locales and depths within the project components where geologic units of high paleontological sensitivity occur, and to determine the frequency in which monitoring will be undertaken to ensure the proper management of paleontological resources. The SFPUC shall review and approve the plan in consultation with the ERO. **Paleontological Resources Training.** All construction forepersons and field supervisors shall be trained in the recognition of potential fossil materials prior to the initiation of any site preparation or start of construction. Training on paleontological resources shall also be provided to all other construction workers, but may include videotape of the initial training and/or the use of written materials rather than in-person training by the qualified paleontologist. In addition to fossil recognition, the training shall convey procedures to follow if construction crews encounter potential fossil materials in the course of earthwork, excavation, or grading, as described below.	1) SFPUC EMB 2) CM Team (qualified paleontologist or CA registered geologist) 3) CM Team (qualified paleontologist or CA registered geologist) 4) CM Team (qualified paleontologist or CA registered geologist) 5) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM/ERO 4) SFPUC BEM and SF Planning Department 5) SFPUC BEM	1) Ensure that contract documents include requirements related to paleontological resources including training and discoveries. 2) Obtain and review resume or other documentation of paleontologist's qualifications. Ensure that contractor's staff participate in the environmental training prior to beginning work and sign the training sign-in sheet. Maintain file of sign-in sheets. 3) Prepare Paleontological Monitoring Plan for ERO review and approval. 4) File documentation of paleontologist's qualifications (e.g., resume). If monitoring is required in the Paleontological Monitoring Plan, document paleontological monitoring activities in logs. In the event of a discovery, confirm suspension of work, examine fossil, and report as required. 5) Monitor to ensure that the contractor implements measures in contract documents report noncompliance, and ensure corrective action.	1) Design 2) Pre-construction and construction 3) Pre-construction 4) Construction 5) Construction

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			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
CP-3 (cont.)		**Active Monitoring of Construction Sites for Paleontological Resources, if Recommended in the Paleontological Monitoring Plan.** Paleontological monitoring shall consist of inspecting disturbed, graded, and excavated surfaces, as well as soil stockpiles and disposal sites in accordance with the schedule and methods outlined in the Paleontological Monitoring Plan. The monitor (i.e., the professional paleontologist or a designee of the paleontologist) shall have authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely and/or recover fossils. The monitor shall coordinate with the construction manager to ensure that monitoring is thorough but does not result in unnecessary delays. If the monitor encounters a paleontological resource, he or she shall assess the fossil, and record or salvage it, as described above. **Assessment and Salvage of Potential Fossil Finds.** If the paleontological monitor or construction crews discover potential fossils, all earthwork or other types of ground disturbance within 50 feet of the find shall stop immediately until the qualified professional paleontologist can assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the monitor may record the find and allow work to continue, or recommend salvage and recovery of the fossil. The monitor may also propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. Recommendations for any necessary treatment shall be consistent with the SVP 1995 and 1996 guidelines and currently accepted scientific practices. If required, treatment for fossil remains may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection, and may also include preparation and publication of a report describing the finds. The monitor's recommendations shall be subject to review and approval by the ERO or designee. The SFPUC shall be responsible for ensuring that treatment is implemented and reported to the San Francisco Planning Department. If no report is required, the SFPUC shall nonetheless ensure that information on the nature, location, and depth of all finds is readily available to the scientific community through university curation or other appropriate means.				

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CP-4	Project construction could result in a substantial adverse effect related to the disturbance of human remains.	**M-CP-4: Treatment of Inadvertently Discovered Human Remains** This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only. The treatment of any human remains and associated funerary objects discovered during soil-disturbing activities shall comply with applicable state laws. Such treatment would include immediate notification of the San Mateo County coroner and, in the event of the coroner's determination that the human remains are Native American, notification of the NAHC, which would appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The archaeological consultant, SFPUC, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated objects (CEQA Guidelines Section 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties could not agree on the reburial method, the SFPUC shall follow Section 5097.98(b) of the PRC, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance." All archaeological work performed under this mitigation measure shall be subject to review by the ERO or designee.	1) SFPUC EMB 2) CM Team (qualified archaeologist) 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents include measures related to discovery of human remains. 2) If potential human remains are encountered, mobilize an archaeologist to confirm existence of human remains. If human remains are confirmed, perform required coordination and notifications. 3) Monitor to ensure that the contractor implements measures in contract documents including insuring that all potential human remains are reported as required and that contractor suspends work in the vicinity. Report noncompliance and ensure corrective action.	1) Design 2) Construction 3) Construction
C-CP	Project construction could result in a cumulatively considerable contribution to cumulative impacts on cultural resources such as archaeological sites (historical and/or unique) including those with human remains, historic architectural, or paleontological resources.	Implement Mitigation Measures M-CP-2a (Distribute "ALERT" Sheet), M-CP-2b (Conduct Archaeological Monitoring in Accordance with Approved Archaeological Monitoring Plan), M-CP-2c (Prepare and Comply with an Archaeological Evaluation Plan and Evaluation Report), M-CP-3 (Prepare and Implement a Paleontological Resources Monitoring Program), and M-CP-4 (Treatment of Inadvertently Discovered Human Remains).	See respective mitigation measures			

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Transportation and Circulation						
TR-1	Project construction activities could decrease the safety of public roadways for vehicles, bicyclists, and pedestrians.	**M-TR-1: Maintain Traffic Flow on San Bruno Avenue West During the A.M. Peak Hour** The SFPUC or its contractor(s) shall maintain eastbound traffic flow on San Bruno Avenue West during the a.m. peak period (generally, between 7 and 9 a.m.) if the temporary closure of the right-turn lane of the I-280 off-ramp and the eastbound San Bruno Avenue West lane adjacent to the project site occur simultaneously. Eastbound traffic flow would be maintained on San Bruno Avenue West during the 2-week period when a portion of the right-hand eastbound lane of San Bruno Avenue would be required for construction activities by plating over the access pit. The SFPUC or its contractor(s) shall coordinate with the City of San Bruno and Caltrans, and the plan for maintaining access shall conform to the California Manual on Uniform Traffic Control Devices (Caltrans, 12).	1) SFPUC EMB 2) SFPUC Communications/ CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that the contract documents include the requirement for traffic flow and lane closure. 2) Ensure that contractor coordinates with the City of San Bruno and Caltrans and verify that lane closure complies with the requirements. 3) Monitor to ensure that contractor implements applicable measures in contract documents. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction
TR-3	Project construction activities could decrease the safety of public roadways for vehicles, bicyclists, and pedestrians.	**M-TR-3: Traffic Control Plan** This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractor(s) shall prepare and implement a traffic control plan. The [traffic control] plan shall conform to the *California Manual on Uniform Traffic Control Devices* (Caltrans, 2012) and shall incorporate the applicable requirements of the jurisdictions of the Town of Colma and the cities of South San Francisco, San Bruno, and Millbrae. It shall be provided for review and comment if requested by these jurisdictions. **General Measures for All Project Sites** • Advance warning signs shall be placed upstream of work areas advising motorists, bicyclists, and pedestrians of the construction zone ahead in order to minimize hazards associated with construction activities, including the vehicular entry and egress of project-related construction activities. • A public information system shall be developed and implemented to advise motorists, bicyclists, and nearby property owners of the impending construction activities (e.g., direct distribution of flyers to affected properties, email notices, portable message signs, and informational signs). • All equipment and materials shall be stored within the designated work areas so as to avoid obstructing traffic. • At all project sites, roadside safety protocols shall be implemented such as advance "Road Work Ahead," "One Lane Road Ahead," "Flagger Ahead," "Prepare to Stop," and "Trucks Entering Road" signs. Warning signs and speed control shall be provided to achieve speed reductions for safe traffic flow through the work zone. • At all sites, pedestrian and bicycle access and circulation shall be maintained during project construction where it is safe to do so. Where appropriate, detours shall be included for bicycles and pedestrians in areas affected by project construction.	1) SFPUC EMB 2) SFPUC Communications/ CM Team 3) CM Team 4) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC BEM	1) Ensure that the contract documents include all applicable measures and the requirement to prepare a Traffic Control Plan including submittals to the San Bruno Fire Marshal. 2) Develop and implement a notification program to notify public as required. 3) Ensure that contractor submits a Traffic Control Plan and verify that it complies with the requirements. Ensure that the contractor coordinates with Caltrans and other applicable agencies and cities for affected roadways and intersections. 4) Monitor to ensure that the contractor implements measures in Traffic Control Plan Including submittals to the San Bruno Fire Marshal. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Pre-construction/ Construction 4) Construction

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TR-3 (cont.)		• To the maximum extent feasible, truck trips (i.e., haul trucks and heavy construction equipment) shall be scheduled outside of the a.m. (7 to 9 a.m.) and p.m. (4 to 6 p.m.) peak commute periods. • At all project sites, construction shall be coordinated with facility owners or administrators of sensitive land uses such as schools, police and fire stations, churches, hospitals, and residences. Facility owners or operators shall be notified in advance by the SFPUC regarding the timing, location, and duration of construction activities, and the locations of detours and lane closures. • Roadway rights-of-ways shall be repaired or restored to their original conditions or better upon completion of construction. ***Specific Measures for Project Sites*** • At the **Colma** site, construction worker parking shall be accommodated within the project area boundary. At the Colma Site, flaggers shall be provided at the Serramonte Boulevard driveway to the staging area and Kohl's department store site, to reduce the potential for conflicts between construction vehicles and customers accessing the Kohl's parking lot via Serramonte Boulevard. If construction activities occur on weekends, flaggers shall also be provided. • At the **South San Francisco** site, flaggers shall be provided at new project driveway on West Orange Avenue to facilitate pedestrian travel adjacent to the project site. Construction worker parking shall be accommodated within the project staging area, or within the common staging area; carpooling between the South San Francisco site and the common staging area shall be established. • At the **San Bruno North** site, the construction contractor shall obtain an encroachment permit from Caltrans, and comply with Caltrans requirements for traffic control activities within the State right-of-way, as described in Section 3.10, Required Permits. • At the **San Bruno South** site, travel lane closures on Whitman Way shall be limited during the a.m. (7 to 9 a.m.) and p.m. (4 to 6 p.m.) peak periods to the maximum extent feasible. Outside of allowed working hours or when work is not in progress, Whitman Way shall be restored to normal operations by covering all trenches with steel plates. When sidewalk closures are required on Whitman Way, pedestrian detour routes shall be maintained. At the intersection of Shelter Creek Lane and the driveway to the Shelter Creek Condominiums (Intersection #5), the construction contractor shall provide flaggers to facilitate truck access into and out of the project work area at the Shelter Creek Condominiums. Access to lower Garage 4, Lot B, and Lot C shall be maintained to the maximum extent feasible, and alternative fire access to building #3B shall be maintained.				

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TR-3 (cont.)		The construction contractor shall be required to have ready at all times the means necessary to accommodate emergency vehicles, such as plating over excavations through the use of steel place to provide for a fire lane with a minimum width of 12 feet. The traffic control plan shall include flaggers with radio communication to allow ingress/egress to the parking areas. Flaggers shall be provided on Courtland Drive at the construction vehicle access to the staging area within the Peninsula High School site, to reduce the potential for conflicts between construction vehicles and vehicles destined to other parking or passenger loading/unloading areas within the site. If construction activities occur on weekends, flaggers shall be provided. Plans and Specifications at 65 percent design completion, along with the traffic control plan, shall be submitted to the San Bruno Fire Marshal when available for review and comment. Construction worker parking shall be accommodated within the project area boundary. • At the **Millbrae** site, the SFPUC or the construction contractor shall coordinate with the schedule of schools to minimize impacts on school operations to the maximum extent feasible. At the Millbrae site, to the maximum extent feasible, construction haul trips shall not be conducted prior to 9 a.m. or after 3 p.m. when children are traveling to and from the Meadows Elementary School and the Glen Oaks/Millbrae Montessori School. Similarly, if determined appropriate by the school administrators, the SFPUC or the construction contractor shall provide traffic control officers at the intersections of Helen Drive/Larkspur Drive (Intersection #9) near the Meadows Elementary School, and Santa Margarita Avenue/Capuchino Drive (Intersection #11) near the Glen Oaks/Millbrae Montessori School. If sidewalk closures are required on Ridgewood Drive, pedestrian detour routes shall be provided. • At the **Common Staging Area**, construction worker parking for the PPSU project shall be accommodated within the site, as feasible.				

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C-TR	Project construction could result in a cumulatively considerable contribution to cumulative traffic increases and safety hazards on local and regional roads.	**M-C-TR: Assign a SFPUC Water System Improvement Program Projects Construction Coordinator** This mitigation measure applies to all project sites, as well as the common staging area. Due to the potential for overlapping project activities and the operation of construction vehicles to affect travel along local roadways, the SFPUC shall assign a qualified construction coordinator responsible for coordinating the project-specific traffic control plan developed as part of **Mitigation Measure TR-3: Traffic Control Plan** with other SFPUC projects, including, but not limited to the Regional GSR project and the HTWTP Long-Term Improvements project. Throughout the construction schedule for the SFPUC projects in the Water System Improvement Program Peninsula Region, the SFPUC construction coordinator shall work with local and regional agencies to minimize local and regional traffic impacts, and shall incorporate these measures into the SFPUC's project-specific traffic control plans. Such measures could include, but would not be limited to, monitoring during construction to identify intersections or areas of problematic cumulative congestion or hazard; and re-routing or coordinating the timing of vehicular or truck trips to avoid or minimize such congestion or hazard.	1) SFPUC EMB 2) CM Team (traffic coordinator) 3) CM Team (traffic coordinator) 4) CM Team (traffic coordinator)	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC BEM	1) Ensure that contract documents include the requirement to coordinate with other SFPUC projects. 2) Assign a qualified construction coordinator responsible for coordinating the PPSU project-specific traffic control plan with other SFPUC projects. 3) Work with local and regional agencies to minimize local and regional traffic impacts. 4) Monitor to ensure that the contractor implements traffic control measures. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Pre-construction/ Construction 4) Construction
		Implement Mitigation Measures M-TR-1 (Maintain Traffic Flow on San Bruno Avenue West During the A.M. Peak Hour) and M-TR-3 (Traffic Control Plan).	See Mitigation Measures M-TR-1 and M-TR-3			
Noise						
NO-1	Daytime construction activities could result in substantial temporary increases in ambient daytime noise levels that could interfere with nearby land uses.	**M-NO-1: Prepare and Implement Administrative and Source Controls** This mitigation measure applies to all project sites, but does not apply to the common staging area. The SFPUC shall include in construction contract specifications the requirement to prepare a noise control plan. The contractor shall submit a noise control plan, prepared by a qualified noise consultant, to the SFPUC for review and approval at least 21 days before the start of mobilization/construction. The SFPUC shall require the noise consultant to be a board-certified Institute of Noise Control Engineering member or other qualified consultant or engineer, to be approved by the SFPUC project construction manager. The noise control plan shall contain performance standards based on the more-restrictive of the 60-dBA [A-weighted-decibels] Leq [equivalent continuous noise level] sleep interference threshold (applicable to nighttime construction), the 70 dBA Leq speech interference threshold (for daytime construction) and the limits established in noise ordinances of San Mateo County, the Town of Colma, and the cities of San Bruno and Millbrae. The noise control plan shall identify the applicable threshold for each project site. The noise control plan shall, at a minimum, contain the following elements:	1) SFPUC EMB 2) CM Team 3) SFPUC Communications/ CM Team 4) SFPUC Communications/ CM Team 5) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC BEM 5) SFPUC BEM	1) Ensure that contract documents include noise performance standards and the requirement that contractor's qualified noise consultant prepare and implement a noise control plan. 2) Ensure that contractor's qualified noise consultant prepares and submits a noise control plan that complies with noise performance standards. 3) Designate project liaison responsible for responding to noise complaints. Develop procedures for receiving and responding to questions and complaints. Ensure public questions and complaints are responded to and corrective actions taken as needed. 4) If contractor is unable to mitigate noise by measures described in this mitigation measure, the contractor shall work with the SFPUC communications liaison and construction management team to provide alternative solutions as described in item (i) of the Mitigation Measure.	1) Design 2) Pre-construction 3) Construction 4) Construction 5) Construction

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NO-1 (cont.)		• Location of equipment, parking, and other noise generating sources. • Detailed list of potential noise control methods to meet the performance standards. Locations where it is not feasible to meet the performance standards shall be identified • Proposed staging and schedule of noise control measures. • Anticipated performance of noise control measures. • Number and location of monitoring locations and relation to stationary noise controls and sensitive receptors. • Schedule for ongoing monitoring and reporting of construction noise levels to meet performance standards. Monitoring shall occur at least weekly, or more often if needed, in response to complaints. Specific noise control measures that shall be contained in the plan may include, but are not limited to, the following: a) Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will be used for all equipment and trucks in order to minimize construction noise impacts. b) If impact equipment (e.g., concrete/rock breaker, rock drill) is used during project construction, hydraulically or electric-powered equipment will be used to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust will be used (a muffler can lower noise levels from the exhaust by up to 10 dBA). External jackets on the tools themselves will be used, which could achieve a reduction of 5 dBA. Quieter procedures, such as drilling or vibratory methods rather than impact equipment, will be used. c) Alternative shoring installation techniques, such as beam-and-plate or drilled soldier piles, shall be employed to meet noise thresholds. d) The use of vibratory rollers and pile drivers shall be limited to the hours between 7 a.m. and 5 p.m., except in the City of San Bruno, where such equipment shall be limited to the hours between 9 a.m. and 5 p.m.; and in the City of Millbrae, where such equipment shall be limited to the hours between 8 a.m. and 5 p.m. e) Locate stationary noise sources away from sensitive receptors. If the sources must be located near receptors, adequate muffling (with enclosures where appropriate) will be used to ensure performance standards are met. Enclosure openings or vents will face away from sensitive receptors. If any stationary equipment (pumps, ventilation fans, generators) is operated beyond the ordinance time limits, this equipment will conform to the affected jurisdiction's noise limits.			5) Monitor to ensure that the contractor implements the specified noise control measures/plan. Report noncompliance and ensure corrective action.	

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NO-1 (cont.)		f) Erect temporary noise barriers to maintain construction noise levels at or below the performance standards. Barriers shall be constructed with a solid material with a density of at least 2 pounds per square foot with no gaps. The location, height, and specification of the barriers shall be determined by the approved noise consultant as part of the noise control plan. g) Designate a project liaison to be responsible for responding to noise complaints during construction. The name and phone number of the liaison will be conspicuously posted at construction areas and on all advanced notifications. The liaison will take steps to resolve complaints, including the arrangement of periodic noise monitoring, if necessary. Results of noise monitoring will be presented at regular project meetings with the project contractor, and the liaison will coordinate with the contractor to modify any construction activities that generated excessive noise levels. h) In the event of noise complaints, the contractor shall provide information to the SFPUC within 48 hours of being notified of the complaint regarding the noise levels measured and activities that correspond to the complaints. The SFPUC will compare the noise levels to the information in the noise control plan, and the effectiveness of the noise control measures will be verified by the contractor. The contractor will be responsible for the correct installation and use of all implemented noise control measures and for complying with noise specifications. i) For the limited locations where the contractor is unable to mitigate noise through the measures described above (a through h), the contractor shall work with the SFPUC communications liaison and construction management team to provide alternative solutions. The contractor will provide a white noise machine* to residents adjacent to the construction work area whose exterior nighttime noise level due to project construction activities exceeds 60 dBA, or exceeds the daytime speech interference threshold of 70 dBA Leq. Exceedances of the dBA criterion shall first be verified by field acoustical measurements. On a case-by-case basis, when the white noise machine does not provide an effective solution and when there are special circumstances such as those home owners with verified special medical conditions or those who work at night and therefore need to sleep during daytime hours, the SFPUC will offer to temporarily relocate them to a nearby hotel. Special medical conditions shall be verified by a doctor. * *A white noise machine is a device that produces a soothing humming or a fan-like sound.*				

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NO-1 (cont.)		To mitigate the contribution to elevated noise levels from back-up alarms, the contractor may use administrative controls instead of audible back-up alarms, subject to safety priorities and consistency with state and federal worker safety laws. Administrative controls may include designing traffic patterns at the project sites to minimize the need for backward movement, or requiring a spotter or flagger in clear view of the operator to direct the backing operation, or requiring the operator to dismount and circle the vehicle immediately prior to starting a reverse operation. Alternatively, the SFPUC may consult with the California Division of Occupational Safety and Health (Cal/OSHA) to determine whether additional noise reductions may be achieved through Cal/OSHA-approved alternatives to back-up alarms without compromising site safety. If Cal/OSHA indicates that such alternatives are a viable option and the SFPUC, in consultation with the contractor, determines that site safety would not be compromised, then the contractor shall apply for a variance from Cal/OSHA and use such alternatives consistent with Cal/OSHA requirements. Such alternatives could include, but are not limited to: • "Smart" alarms that have an audible range of 77 to 103 dBA (but limit the warning signal to 5 dBA over ambient noise levels). • Radar presence-sensing alarms that identify objects in the reversing path of a truck. • Use of "bbs-tek" broadband back-up alarm systems that use a broadband sound instead of a more noticeable single-frequency sound. • Use of strobe lights instead of audible alarms. The administrative source controls and alternatives identified above that are approved by Cal/OSHA instead of back-up alarms shall be included in the noise control plan. If none of these alternatives to back-up alarms can be implemented, the use of back-up alarms shall be minimized by routing the trucks and equipment through sites in a manner that reduces the need to back up.				
NO-2	Nighttime construction and dewatering activities could result in substantial temporary increases in ambient nighttime noise levels that could interfere with nearby land uses.	Implement Mitigation Measure M-NO-1 (Prepare and Implement Administrative and Source Controls).	See Mitigation Measure M-NO-1			

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NO-3	Construction activities could result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance.	**M-NO-3a: Limit Hours of Construction at Colma Site** This mitigation measure applies to the Colma site. Any construction work conducted within the Town of Colma shall be limited to the hours established in the Town noise ordinance (weekdays 7:00 a.m. to 8 p.m. and weekends 10 a.m. to 6 p.m.), unless determined otherwise by the Colma building official.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Ensure that contract documents include noise limits for the Colma site. 2) Monitor to ensure that the contractor is in compliance with the restricted hours. Report noncompliance and ensure corrective action.	1) Design 2) Construction
		M-NO-3b: Limit Hours of Construction at Millbrae Site This mitigation measure applies to the Millbrae site. Except for dewatering activities, any construction work conducted within the City of Millbrae shall be limited to the following hours: weekdays 8 a.m. to 6 p.m.; Saturdays 8 a.m. to 6 p.m.; and Sundays and holidays 9 a.m. to 6 p.m., which is in compliance with the City noise ordinance.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Ensure that contract documents include noise limits for the Millbrae site. 2) Monitor to ensure that the contractor is in compliance with the restricted hours. Report noncompliance and ensure corrective action.	1) Design 2) Construction
		Implement Mitigation Measure M-NO-1 (Prepare and Implement Administrative and Source Controls).	See Mitigation Measure M-NO-1			
NO-4	Construction activities could result in exposure of persons or structures to generation of excessive groundborne vibration.	**M-NO-4: Develop and Implement Vibration Planning, Monitoring, and Reporting** This mitigation measure applies to the South San Francisco, San Bruno North, San Bruno South, and Millbrae sites. The SFPUC shall include in construction contract specifications the requirement to prepare and implement a vibration control plan. The contractor shall submit a vibration control plan, prepared by a qualified vibration consultant, to the SFPUC for review and approval at least 21 days before the start of mobilization/construction. The vibration control plan shall contain measures to reduce construction-related vibration to meet the 0.3 in/sec PPV damage potential threshold. In addition, at the San Bruno North site, the plan shall contain measures to reduce construction-related vibration to meet the 0.01 in/sec PPV nighttime annoyance potential threshold, to the extent feasible. The vibration control plan shall, at a minimum, contain the following elements: • Procedures outlining the coordination among the SFPUC, the contractor, field monitors, and property owners. • Address the use of low-vibration equipment (or using lower power equipment or lower power setting) and methods when working near residential receptors.	1) SFPUC EMB 2) SFPUC Communications/ CM Team 3) CM Team 4) CM Team 5) CM Team 6) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM/CMB 4) SFPUC BEM 5) SFPUC BEM 6) SFPUC CMB	1) Ensure that contract documents include the requirement for the preparation of a vibration control plan and the specific requirements listed therein. 2) Provide outreach and information to affected residential receptors and offer to perform pre-construction crack surveys to homes within 200 feet of the project. 3) Consult with a California-licensed geotechnical engineer to develop procedures to reduce vibration impacts on adjacent sensitive receptors. 4) Ensure contractor's qualified vibration specialist monitors vibration in accordance with the plan. 5) Monitor the contractor to ensure the recommendations of the final geotechnical report are implemented. Report noncompliance and ensure corrective action. 6) Perform post-construction structure evaluations.	1) Design 2) Pre-construction/ Construction 3) Pre-construction/ Construction 4) Construction 5) Construction 6) Post-construction

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NO-4 (cont.)		Specific vibration control measures that could be addressed in the plan include, but are not limited to, the following: a) Avoiding or reducing simultaneous operation of multiple pieces of construction equipment in proximity to buildings. b) The use of vibratory rollers and pile drivers shall be limited to the hours between 7 a.m. and 5 p.m., except in the City of San Bruno and the City of Millbrae where such equipment shall be limited to the hours between 9 a.m. and 5 p.m. and between 8 a.m. and 5 p.m., respectively. c) Continuous monitoring of vibration levels when vibratory equipment is in use within 50 feet of residential receptors. d) Continuous monitoring of pile driving vibration levels within 150 feet of residential receptors. e) Pile driving is not to occur within 60 feet of residential structures; the contractor must provide trench shoring using another less-vibration-intensive method within 60 feet of residential structures. f) Weekly reporting of the vibration monitoring results, including distribution of reports to interested parties that have requested them. If construction vibration monitoring demonstrates that the project-generated vibration is lower than the values estimated, then the SFPUC could allow these activities to be conducted within the buffer zones, based on evaluation of monitoring data by a qualified vibration consultant. The SFPUC will consult with a California-licensed geotechnical engineer to develop procedures to reduce vibration impacts on adjacent sensitive receptors. The SFPUC will ensure that the construction contractor follows the recommendations of the final geotechnical report regarding excavation and construction. The SFPUC will also ensure that the construction contractor monitors adjacent residential receptors during construction as recommended by the geotechnical engineer. The construction contractor will use low-vibration equipment and appropriate trench shoring when working close to buildings, when required by the geotechnical engineer. If necessary, trench shoring near buildings will be designed with the capacity to support the soil loading, as determined by the project structural and/or geotechnical engineer. The construction contractor will monitor the building until the trench is backfilled.				

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NO-4 (cont.)		SFPUC and the contractor will coordinate with property owners to attempt to gain property access where necessary for vibration monitoring. Where access is granted, the SFPUC shall conduct monitoring to assess construction vibration impacts on adjacent buildings. The SFPUC shall assess the building's pre-construction conditions, identify potential sources of background vibration, and monitor construction vibration near adjacent residential receptors using appropriate monitoring equipment. The SFPUC will coordinate with the construction contractor to adjust construction techniques so as to keep vibration levels below the 0.3 in/sec PPV threshold potential damage criterion. The SFPUC will conduct visual surveys during construction, monitor for cracks and other damage, and conduct a post-construction structural evaluation. SFPUC will provide outreach and information to affected residential receptors regarding projected vibration. At a minimum, this will be provided to residences with structures within approximately 200 feet of construction activities. For residential structures within these zones, the SFPUC will convey to the owners the fact that structural damage occurs at very high vibration levels, far above the threshold of human perception, and that vibration from construction activities will be monitored to prevent structural damage.				
C-NO	Construction of the proposed project could result in a cumulatively considerable contribution to cumulative noise and vibration impacts.	Implement Mitigation Measure M-NO-1 (Prepare and Implement Administrative and Source Controls).	See Mitigation Measure M-NO-1			
Air Quality						
AQ-1	Project construction could violate air quality standards or contribute significantly to an existing air quality violation.	**M-AQ-1: BAAQMD Basic Construction Measures** This mitigation measure applies to all project sites and the common staging area. The SFPUC shall post one or more publicly visible signs with the telephone number and person to contact at the SFPUC with complaints related to excessive dust or vehicle idling. This person shall respond to complaints and, if necessary, take corrective action within 48 hours. The telephone number and person to contact at the BAAQMD's Compliance and Enforcement Division shall also be provided on the sign(s) in the event that the complainant also wishes to contact the applicable air district. In addition, to limit dust, criteria pollutants, and precursor emissions associated with project construction, the following BAAQMD-recommended Basic Construction Measures shall be included in all construction contract specifications for the proposed project: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material offsite shall be covered.	1) SFPUC EMB 2) SFPUC Communication Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that the contract documents include specified dust control measures and exhaust control measures, including signage requirements. 2) Designate project liaison responsible for developing and implementing procedures responding to complaints related to dust or vehicle idling. Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction/ Construction 3) Construction

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AQ-1 (cont.)		• All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • Vehicle speeds on unpaved areas shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times for construction equipment (including vehicles) shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes. Clear signage of this requirement shall be provided for construction workers at all access points to construction areas. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.				
C-AQ	Project construction could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).	Implement Mitigation Measure M-AQ-1 (BAAQMD Basic Construction Measures).	See Mitigation Measure M-AQ-1			

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Recreation						
RE-1	The proposed project could temporarily degrade existing recreational uses during construction.	**M-RE-1: Coordination with Green Hills Country Club Facility Managers** This mitigation measure applies to the Millbrae site. The SFPUC shall work with the Green Hills Country Club prior to initiation of project activities on the golf course property, and shall coordinate with the club to implement measures that will facilitate maximum continued use of golf course facilities during project construction. Staging areas and access routes should be located to avoid use of fairways, where practicable. Continued play of the fifth hole (adjacent to the construction zone and staging area) should be allowed, to the extent feasible. The access road through the driving range should be aligned to the maximum extent practicable to avoid sensitive, highly developed and expensive features such as the chipping green and unique bunkers, such as deep sand traps with steep slopes. In addition, alternatives to allow the continued use of the fifth hole should be considered.	1) SFPUC EMB 2) SFPUC Communications/ SFPUC EMB	1) SFPUC BEM 2) SFPUC BEM	1) Include in contract documents requirements related to minimizing impacts on Green Hills Country Club. 2) Coordinate with the club to implement measures that will facilitate maximum continued use of golf course facilities during project construction.	1) Design 2) Design/Pre-construction
Utilities and Service Systems						
UT-1	Project construction could result in a substantial adverse effect related to disruption of utility operations or accidental damage to existing utilities.	**M-UT-1a: Confirm Utility Line Information** This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractors shall locate overhead and underground utility lines that may be encountered during excavation work prior to opening an excavation. Information regarding the size, color, and location of existing utilities shall be confirmed before excavation activities commence. These utilities shall be highlighted on all construction drawings.	1) SFPUC EMB	1) SFPUC BEM	1) Coordinate final construction plans and specifications during the design phase and ensure utility lines are identified on all construction drawings. Ensure that the contract documents include the requirement that contractor coordinate and notify utility service providers.	1) Design
		M-UT-1b: Safeguard Employees from Potential Accidents Related to Underground Utilities This mitigation measure applies to all project sites, as well as the common staging area. While any excavation is open, the SFPUC or its contractors shall protect, support, or remove underground utilities as necessary to safeguard employees. As part of contractor specifications, the contractor(s) shall be required to provide updates on planned excavations for the upcoming week, and to specify when construction will occur near a high-priority utility. SFPUC construction managers shall attend tailgate meetings with contractor staff, as required by the California Occupational Safety and Health Administration, to record all protective and avoidance measures regarding such excavations.	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC CMB 3) SFPUC CMB	1) Ensure that contract documents include applicable requirements to safeguard employees from potential accidents. 2) Conduct weekly tailgate meetings with contractor prior to any work near high-priority utility lines, and record all protective and avoidance measures that will be implemented in such excavations. 3) Monitor to ensure that the contractor implements measures in contract documents and the protective and avoidance measures identified at tailgate meetings. Report noncompliance and ensure corrective action.	1) Design 2) Construction 3) Construction

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UT-1 (cont.)		**M-UT-1c: Notify Local Fire Departments** This mitigation measure applies to all project sites, as well as the common staging area. In the event that construction activities result in damage to high-priority utility lines, including leaks or suspected leaks, the SFPUC or its contractors shall immediately notify local fire departments to protect worker and public safety.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC CMB	1) Ensure that contract documents include the requirement that the contractor notify local fire departments in the event of damage to high-priority utility lines. 2) Obtain documentation from contractor of their notification to local fire departments if damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.	1) Design 2) Construction
		M-UT-1d: Emergency Response Plan This mitigation measure applies to all project sites, as well as the common staging area. Prior to commencing construction activities, the SFPUC shall develop an emergency response plan that outlines procedures to follow in the event of a leak or explosion. The emergency response plan shall identify the names and phone numbers of PG&E staff who would be available 24 hours per day in the event of damage or rupture of the high-pressure PG&E natural gas pipelines. The plan shall also detail emergency response protocols including notification, inspection, and evacuation procedures; any equipment and vendors necessary to respond to an emergency, such as an alarm system; and routine inspection guidelines.	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC CMB	1) Ensure that contract documents include applicable measures including requirement to prepare emergency response plan. 2) Ensure that contractor prepares the emergency response plan and verify compliance with requirements. 3) Monitor to ensure that contractor implements measures in contract documents and emergency response plan. Report non-compliance, and ensure corrective action.	1) Design 2) Pre-construction 3) Construction
		M-UT-1e: Ensure Prompt Reconnection of Utilities This mitigation measure applies to all project sites, as well as the common staging area. Any utilities inadvertently damaged during construction shall be repaired to pre-project conditions. The SFPUC or its contractors shall promptly notify utility providers to reconnect any disconnected utility lines as soon as it is safe to do so.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC CMB	1) Ensure that applicable measure is included in contract documents. 2) Monitor to ensure that contractor notifies utility providers as necessary. Report noncompliance and ensure corrective action is taken.	1) Design 2) Construction
		M-UT-1f: Coordinate Final Construction Plans with Affected Utilities This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractors shall coordinate final construction plans and specifications with affected utilities.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC CMB	1) Provide final construction plans to affected utilities. Ensure contract documents include requirements to notify affected utilities in advance of work near their facilities. 2) Monitor to ensure that contractor notifies utility providers as necessary. Report noncompliance and ensure corrective action is taken.	1) Design 2) Construction
UT-2	Project construction could result in a substantial adverse effect related to the relocation of regional or local utilities.	Implement Mitigation Measures M-UT-1a (Confirm Utility Line Information), M-UT-1b (Safeguard Employees from Potential Accidents Related to Underground Utilities), M-UT-1c (Notify Local Fire Departments), M-UT-1d (Emergency Response Plan), M-UT-1e (Ensure Prompt Reconnection of Utilities), and M-UT-1f (Coordinate Final Construction Plans with Affected Utilities).	See respective mitigation measures			

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UT-5	Project construction could result in a substantial adverse effect related to compliance with federal, State, and local statutes and regulations pertaining to solid waste.	**M-UT-5: Prepare and Implement a Construction Solid Waste Recycling Plan** This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractors shall prepare a construction solid waste recycling plan/waste management plan. The plan should identify the goal of salvaging the maximum amount of demolition debris at all projects sites. The plan should also include identification of the types of debris generated by the project and of how waste streams will be handled; and identification of actions to reuse or recycle construction debris and clean excavated soil to the extent possible. The plan shall include actions to divert waste with disposal in a landfill in accordance, at a minimum, with the solid waste diversion goal set by the California Integrated Waste Management Act, and with local ordinance requirements as follows: • At the Colma site – 50 percent recycling of the waste tonnage from any demolition project where the waste includes concrete and asphalt (or 15 percent where there is no concrete and/or asphalt); and 50 percent recycling of waste tonnage; • At the South San Francisco site and Common Staging Area – 100 percent recycling of inert solids; and at least 50 percent recycling of the remaining construction and demolition debris tonnage; and • At the Millbrae site – 50 percent recycling of all waste generated for the project by weight, with at least 25 percent achieved through reuse and recycling of materials other than source separated dirt, concrete and asphalt. No local ordinances apply at the San Bruno North and South sites; therefore, diversion shall be consistent with State law (at least 50 percent recycling of solid wastes).	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC CMB 3) SFPUC CMB	1) Ensure that contract documents include applicable measures including requirement to prepare solid waste recycling plan. 2) Ensure that contractor prepares and submits solid waste management recycling plan. 3) Monitor to ensure that contractor implements the plan. Report noncompliance and ensure that corrective action is taken.	1) Design 2) Pre-construction 3) Construction
C-UT	Construction of the proposed project could result in a cumulatively considerable contribution to cumulative impacts related to disruption or relocation of utilities.	Implement Mitigation Measures M-UT-1a (Confirm Utility Line Information), M-UT-1b (Safeguard Employees from Potential Accidents Related to Underground Utilities), M-UT-1c (Notify Local Fire Departments), M-UT-1d (Emergency Response Plan), M-UT-1e (Ensure Prompt Reconnection of Utilities), and M-UT-1f (Coordinate Final Construction Plans with Affected Utilities).	See respective mitigation measures			

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Biological Resources						
BI-1	Construction of the proposed project could have a substantial adverse effect through habitat modification on special-status wildlife species.	**M-BI-1a: General Protection Measures** This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC shall ensure that the following general measures are implemented by the contractor(s) during construction to minimize or avoid impacts on biological resources: • Construction contractor(s) shall minimize the extent of the construction disturbance as much as feasible, which shall be limited to boundaries of the project sites. • For trees to be retained or trimmed: – A qualified arborist or a qualified biologist will identify trees to be retained, and exclusion fencing will be installed no closer than the drip line of these trees. – Prior to the start of construction, SFPUC or its contractors will install exclusion fencing at the limits of construction, outside the dripline of all trees bordering the limits. – All necessary tree pruning will be completed either by a certified arborist or by the contractor under the supervision of either an International Society of Arboriculture qualified arborist, American Society of Consulting Arborists consulting arborist, or a qualified horticulturist. • Project-related vehicles shall observe a 15 mile-per-hour speed limit on unpaved roads in the work area, or as otherwise determined by the applicable regulatory agencies. • The contractor shall provide closed garbage containers for the disposal of all food-related trash items (e.g., wrappers, cans, bottles, food scraps). All garbage shall be collected daily from the project site and placed in a closed container from which garbage shall be removed weekly. • Construction personnel shall not feed or otherwise attract wildlife in the project area. • No pets shall be allowed in the project area. • No firearms shall be allowed in the project area. • Staging areas shall be located at least 100 feet from riparian habitat, creeks, and wetlands, where feasible. If not feasible, then staging areas shall be situated outside of the dripline of riparian trees. If a 100-foot setback is not feasible due to field constraints, the project biologist will work with the contractor to determine where the silt fence erected for perimeter control should be placed, and what additional BMPs may be required to prevent construction spoils and sediment from leaving the work area. Sediment controls, such as silt fence or straw wattles, shall be erected along the perimeter of all construction and staging areas to minimize the transport of sediment from the site. If silt fence is used, the fence shall be installed so that the stakes face toward the outside of the work area.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Ensure that the contract documents include the general protection measures including requirement to provide qualified arborist. 2) Monitor to ensure that contractor implements measures. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction/ Construction

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BI-1 (cont.)		• Exclusion fencing shall be erected along the boundaries of construction and staging areas to provide perimeter control, and to prevent construction personnel and activities from entering sensitive areas, as determined to be needed by the project biologist. • If vehicle or equipment fueling or maintenance is necessary, it shall be performed in the designated staging area, consistent with **Mitigation Measure M-HY-1: Preparation and Implementation of a SWPPP** (see Section 5.16, Hydrology and Water Quality).				
		M-BI-1b: Worker Training and Awareness Program This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC shall ensure that mandatory biological resources awareness training is provided to all construction personnel as follows: • The training shall be developed and provided by a qualified biologist or construction compliance manager familiar with the sensitive species that may occur in the project area. If a consulting biologist prepares the training program, SFPUC staff shall approve the program prior to implementation. • The training shall be provided before any work, including vegetation clearing and grading, occurs within the work area boundaries. • The training shall provide education on the natural history of the special-status species potentially occurring in the project area, and discuss the required mitigation measures to avoid impacts on the special-status species and the penalties for failing to comply with biological mitigation requirements. • The environmental awareness training program for construction personnel shall include an orientation regarding the importance of preventing the spread of invasive nonnative plants. • If new construction personnel are added to the project, the contractor shall ensure that they receive training prior to starting work. The subsequent training of personnel can include a videotape of the initial training and/or the use of written materials rather than in-person training by a biologist.	1) SFPUC EMB 2) SFPUC CMB (qualified biologist) 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure the contract documents include the requirement that all construction personnel attend training. 2) Prepare biological-resources awareness program. Include documentation of qualifications of the consulting biologist developing the training program (e.g., resume). 3) Monitor to ensure that all personnel attend training prior to beginning work and sign training sign-in sheet. Maintain file of sign-in sheets. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction

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BI-1 (cont.)		**M-BI-1c: Prepare and Implement a Vegetation Restoration Plan** This mitigation measure applies to all project sites, but does not apply to the common staging area. The SFPUC or contractor shall prepare and implement a vegetation restoration plan with detailed specifications for minimizing the introduction of invasive weeds, and for restoring all temporarily disturbed areas. The plan shall include methods to ensure that the contractor successfully implements the vegetation restoration plan after the project is completed, so that proposed success criteria can be achieved subsequent to construction. • The plan shall be developed by a qualified restoration ecologist familiar with the ecological requirements of special-status species. Willows removed from the South San Francisco site, north of Westborough Boulevard, shall be replaced with vegetation that would provide shelter for California red-legged frog, as specified in the SFPUC's ROW Integrated Vegetation Management Policy (SFPUC, 2007). • The plan shall be developed with the intent to replace (to the extent possible) the function and values of trees removed during the construction project with plants that are acceptable for planting within the SFPUC ROW. • The plan shall indicate the best time of year for seeding to occur and will be consistent with the SFPUC's ROW Integrated Vegetation Management Policy (SFPUC, 2007). The restoration plan shall specify measures to remove and/or control weeds in the project area. For grassland and ruderal areas, the affected areas shall be reseeded with a native or noninvasive grass and forb seed mix. • Replacement of ordinance-protected trees shall be completed as described in **Mitigation Measure M-BI-4: Replacement of Trees to Be Removed.** As specified therein, a qualified biologist shall conduct post-construction monitoring of the replacement trees for 5 years. • The SFPUC or contractor shall ensure that topsoil is salvaged during grading and earthmoving activities (including during the preparation of spoils sites), stockpiled separately from subsoils, and protected from erosion (e.g., covered or watered); that composting amendments are added if necessary; and, if needed, that potentially compacted construction work areas are properly prepared prior to reuse of the soil in the post-construction restoration of temporarily disturbed areas. The SFPUC shall ensure that a minimum of 12 inches of topsoil is salvaged; or, if there is less than 12 inches of topsoil, as much as practicable.	1) SFPUC EMB 2) SFPUC BEM (qualified botanist) 3) CM Team 4) SFPUC NRLMD/ BEM	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC NRLMD/BEM	1) Ensure that contract documents include on-site restoration requirements, including invasive weed control measures. 2) Develop vegetation restoration plan in accordance with mitigation requirements, include documentation of qualifications of botanist (e.g., resume), and perform detailed vegetation surveys. Submit to applicable agencies for approval. 3) Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action. 4) Perform and document long-term monitoring of on-site restoration in accordance with Vegetation Restoration Plan.	1) Design 2) Pre-construction 3) Construction 4) Post-construction

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BI-1 (cont.)		• Construction equipment shall arrive at the project areas free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species. • Any soil amendments, gravel, etc., required for construction and/or restoration activities that would be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material, and certified pathogen-free. Imported fill material shall be covered with the topsoil layer to prevent any imported seed bed from growing. • Certified, weed-free, imported erosion-control materials (or rice straw in upland areas) shall be used exclusively, as applicable (this measure concerns biological material and does not preclude the use of silt fences, etc.). Erosion-control materials shall be natural and biodegradable, such as burlap wattles, and not have plastic netting, especially in areas with the potential for California red-legged frog, to prevent wildlife entanglement. • No invasive nonnative plant species shall be used in any restoration plantings.				
		M-BI-1d: Minimize Disturbance to Nesting Birds and Raptors This mitigation measure applies to all project sites, as well as the common staging area. As feasible, the SFPUC shall conduct tree and shrub removal in the project areas during the nonbreeding season (generally August 15 through February 15) for migratory birds, raptors, and special-status bird species. If trees cannot be removed outside of the bird breeding season, nesting bird surveys will be conducted on all trees prior to removal. If construction activities must occur during the bird breeding season (February 15 to August 15), the SFPUC shall retain a qualified wildlife biologist who is experienced in identifying birds and their habitat to conduct nesting-raptor surveys in and within 300 feet of the project area. Migratory passerine bird surveys shall be conducted within 50 feet of all work areas (as feasible) unless otherwise directed by CDFW. If an area is not accessible for survey, the project biologist shall make a determination if further survey is necessary, and may request assistance to enter properties that may need closer investigation. All migratory bird and active raptor nests within these areas shall be mapped. These surveys must be conducted within 2 weeks prior to initiation of construction activities at any time between February 15 and August 15. If no active nests are detected during surveys, no additional mitigation is required.	1) SFPUC EMB 2) CM Team (qualified biologist) 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents specify measures. 2) If tree removal is not completed during the nonbreeding season, then obtain and review resume or other documentation of consulting biologist's qualifications. Conduct surveys, mapping, and agency coordination. Document activities in monitoring logs. 3) Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction/ Construction 3) Construction

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Impact No.	Impact Summary	Adopted Mitigation Measures	Monitoring and Reporting Program			
			Responsible Party	Reviewing and Approval Party	Monitoring and Reporting Actions	Implementation Schedule
BI-1 (cont.)		If migratory bird and/or active raptor nests are found in the project areas or in the adjacent surveyed area, the SFPUC shall establish a no-disturbance buffer around the nesting location to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late June through mid-July). The extent of these buffers would be determined by a wildlife biologist in consultation with CDFW and would depend on the species' sensitivity to disturbance (which can vary among species); the level of noise or construction disturbance; line of sight between the nest and the disturbance; ambient levels of noise and other disturbances; and consideration of other topographical or artificial barriers. The wildlife biologist shall analyze and use these factors to assist the CDFW in making an appropriate decision on buffer distances.				
		M-BI-1e: Pre-construction Surveys for Special-Status Bats and Avoidance and Minimization Measures This mitigation measure applies to the Millbrae site. Not more than 1 week prior to tree removal in the project areas, a qualified biologist (i.e., one familiar with the identification of bats and signs of bats) shall identify trees that might be potential day or maternity roosts. Bats may be present any time of the year. The biologist shall thoroughly search the tree or snag that provides appropriate habitat (trees with foliage or cavities or that are hollow) for the presence of roosting bats or evidence of bats. If bats are found or evidence of use by bats is present, the following procedures shall be implemented before felling the tree: 1. Trees shall be removed under the warmest possible conditions. Peel any sections of the exfoliated bark off the tree gently and search for any roosting bats underneath. Create noise and vibrations on the tree itself. Noise and vibrations may include running a chain saw and making shallow cuts in the trunk (where bark has been), and striking the tree base with fallen limbs or tools such as hammers. Disturbance shall be near-continuous for 10 minutes, and then another 10 minutes shall pass before the tree is felled. When cutting sections of the trunk, if any hollows or cavities (such as woodpecker holes) are discovered, be especially careful to check for the presence of bats in those areas. Cut slowly and carefully at all times. If possible, section trunk near cavities to focus noise and vibrations, and open hollows by sectioning off a side. 2. The SFPUC will ensure that trees are not removed or altered until CDFW has been contacted for guidance on measures to avoid and minimize disturbance of the bats. Additional measures may include monitoring trees, excluding bats from a tree until it is removed and/or restricting the timing of tree removal, and use of a construction buffer to avoid breeding disturbance of young before they are able to fly (for pallid bats, this period is between April and August).	1) SFPUC EMB 2) CM Team (qualified biologist) 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents specify measures. 2) Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct surveys and agency coordination if needed. Document activities in monitoring logs. 3) Monitor to ensure that the contractor implements required measures. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction

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BI-1 (cont.)		**M-BI-1f: Mitigation for the Mission Blue Butterfly** This mitigation measure applies to the Millbrae site. At the Millbrae site, not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, the qualified biologist shall survey grassland habitat in the project area for Mission blue butterfly and its larval host plant. As feasible, host plants identified within the project boundaries shall be fenced or flagged and avoided during construction. If it is infeasible to avoid host plants of the Mission blue butterfly, SFPUC shall restore the site to pre-construction conditions.	1) SFPUC EMB 2) CM Team (qualified biologist) 3) CM Team 4) CM Team (qualified biologist)	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC BEM	1) Ensure that contract documents specify measures. 2) Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct surveys, and fence protected species if feasible. Document activities in monitoring logs. 3) Monitor to ensure that the contractor avoids fenced/ flagged areas. Report noncompliance and ensure corrective action. 4) If avoidance is not feasible, restore the site to pre-construction conditions.	1) Design 2) Pre-construction 3) Construction 4) Construction/Post-construction
		M-BI-1g: Mitigation for San Francisco Dusky-Footed Woodrat Middens This mitigation measure applies to the South San Francisco and Millbrae sites. Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, the qualified biologist shall survey the areas to be disturbed within the Central Coast riparian scrub (South San Francisco site) and eucalyptus grove and coast live oak woodland (Millbrae site) for San Francisco dusky-footed woodrat and their nests. If no middens are found within such areas, no further action is required. If middens are found and can be avoided, the biologist shall direct the contractor in placing orange barrier fencing between the proposed construction clearing and the midden, allowing as much room as possible to avoid indirect disturbance to the midden, but no less than 2 feet from and along the construction side of the middens to protect them from construction activities. If avoidance is not feasible and the minimum fencing distance cannot be achieved, a qualified biologist shall disassemble middens or, if adjacent habitat is not suitable, trap and relocate woodrats out of the construction area (using live-traps) prior to the start of construction. In addition, the biologists shall attempt to relocate the disassembled midden to the same area where the woodrats are released. If young are present during disassembling, discontinue disassembling and inspect every 48 hours until young have relocated. The midden may not be fully disassembled until the young have left.	1) SFPUC EMB 2) CM Team (qualified biologist) 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents specify measures. 2) Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct surveys, and fence protected species or relocate species. Document activities in monitoring logs. 3) Monitor to ensure that the contractor avoids fenced/ flagged areas. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction

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BI-1 (cont.)		**M-BI-1h: Mitigation for the California Red Legged Frog** This mitigation measure applies to the South San Francisco site. Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, the qualified biologist shall survey the South San Francisco site project area for California red-legged frog, and potential refuge or burrow/estivation sites. As feasible, potential burrow/estivation areas identified within the project boundaries shall be temporarily fenced and avoided. At locations where potential refuge/estivation burrows are identified and cannot be avoided, burrows shall be excavated by hand or by other means by a qualified biologist, approved by the CDFW and USFWS, prior to construction. If a burrow is occupied, the individual animal shall be moved to suitable habitat within 0.25 mile of the project area, or other location as agreed by the appropriate agencies, where a natural burrow or artificial burrow will be constructed of PVC pipe. Even if California red-legged frog species are not found at the site, temporary exclusion fencing shall be installed as described below to prevent movement of the species. At the beginning of each work day at the South San Francisco site that includes initial ground disturbance, including grading, excavation, and vegetation removal activities, a qualified biological monitor shall conduct on site monitoring for California red-legged frog in the area where ground disturbance shall occur, as follows: • The South San Francisco site shall be surveyed prior to any ground disturbing or vegetation removal activities. • Prior to the start of construction at the South San Francisco site, the contractor, in coordination with a qualified biologist, shall install wildlife exclusion fencing to prevent species such as California red-legged frog from moving through the project site. If a silt fence is used as an exclusion fence, it shall be installed with the stakes on the inside of the work area (facing construction) so that wildlife cannot climb up the stakes to enter the construction zone. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed, and that construction equipment is confined to the designated work areas. The fencing shall be made of suitable material that does not allow the species to pass through, and the bottom shall be buried to a depth of 6 inches (or to a sufficient depth specified by the applicable resource agencies) so that these species cannot crawl under the fence. The fencing shall have one-way escape vents to allow for species to leave the site. • Perimeter fences shall be inspected weekly to ensure they do not have any tears or holes, that the bottoms of the fences are still buried, and that no individuals have been trapped in the fences.	1) SFPUC EMB 2) CM Team (qualified biologist) 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents specify measures. 2) Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct surveys, monitoring, and relocation activities. Document activities in monitoring logs. 3) Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective actions.	1) Design 2) Pre-construction/ Construction 3) Construction

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BI-1 (cont.)		• Any California red-legged frogs found along and inside the fence shall be closely monitored until they move away from the construction area, or the biologist may be brought in to relocate the frog as described above. • All open trenches or holes and areas under parked vehicles shall be checked daily for the presence of California red-legged frogs. • All excavated or deep-walled holes or trenches greater than 2 feet shall be covered at the end of each workday using plywood or similar materials, or escape ramps shall be constructed of earth fill or wooden planks. Before such holes are filled, they shall be thoroughly inspected for trapped animals. • In cases where excavations require dewatering, the intakes shall be screened with a maximum mesh size of 5 millimeters. • Project personnel shall be required to immediately report any harm, injury, or mortality of a special-status species during construction (including entrapment) to the construction foreman or biological monitor, and the construction foreman or biological monitor shall immediately notify the SFPUC. The SFPUC shall provide verbal notification to the USFWS Endangered Species Office in Sacramento, California, and/or to the local CDFW warden or biologist (as applicable) within one working day of the incident. The SFPUC shall follow up with written notification to USFWS and/or CDFW (as applicable) within five working days of the incident. All observations of federally- and state-listed species shall be recorded on CNDDB field sheets and sent to the CDFW by the SFPUC or representative biological monitor. • Willows removed from the South San Francisco site, north of Westborough Boulevard, shall be replaced with vegetation that would provide shelter for California red-legged frog, as specified in the SFPUC's ROW Integrated Vegetation Management Policy (SFPUC, 2007). Replacement plantings will be included in the Vegetation Restoration Plan.				
		Implement Mitigation Measure M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).	See respective mitigation measures			
BI-2	Construction of the proposed project could have a substantial adverse effect on coast live oak woodland, central coast riparian scrub habitat, or other sensitive natural community.	**M-BI-2a: Minimize Disturbance to Riparian Habitat** This mitigation measure applies to the South San Francisco site. To minimize impacts to Central Coast riparian scrub and water quality in the drainage situated adjacent to the northwest end of the work area, a silt fence shall be placed along the work area boundaries adjacent to the drainage. This would prevent construction personnel from damaging riparian vegetation outside of the work area, and prevent sediment and debris from entering the drainage.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Ensure that the contract document include measures. 2) Monitor to ensure that contractor implements measures in contract documents. Report noncompliance and ensure corrective action.	1) Design 2) Construction

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BI-2 (cont.)		**M-BI-2b: Supplemental Measures for the Vegetation Restoration Plan** This mitigation measure applies to the South San Francisco site. The following activities shall be completed for the Vegetation Restoration Plan at the site: • To facilitate preparation of the plan, the SFPUC shall ensure that prior to construction a qualified botanist (i.e., one experienced in identifying plant species in the project area) performs additional pre-construction surveys of the areas to collect more detailed vegetation composition data, including species occurrence, vegetation characterization (tree diameter size, etc.), and percent cover of plant species. Photo documentation shall be used to show pre-project conditions. • If required, the SFPUC shall provide the vegetation restoration plan to the CDFW and RWQCB during the permitting process, as any vegetation to be removed may provide habitat for special-status species and may also be within areas under the jurisdiction of the Corps and the RWQCB. • Although trees cannot be replanted within the SFPUC ROW, native plant species allowed for planting as described in the Right of Way Integrated Vegetation Management Policy (SFPUC, 2007) should be selected and planted in appropriate locations. Enhancement of the riparian corridor outside of the ROW may be incorporated into the Vegetation Restoration Plan (see Impact BI-1, above, for description). • To ensure success, vegetation planted as part of the vegetation restoration plan will be monitored for up to 5 years following installation. In addition, monitoring shall be conducted for 5 years for any tree species planted; except for tree species planted in riparian habitat, for which the monitoring period shall be 10 years.	1) SFPUC BEM (qualified botanist) 2) SFPUC EMB 3) CM Team 4) SFPUC NRLMD/BEM	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC NRLMD/BEM	1) Develop vegetation restoration plan in accordance with mitigation requirements, include documentation of qualifications of botanist (e.g., resume), and perform detailed vegetation surveys. Submit to applicable agencies for approval. 2) Ensure that contract documents include on-site restoration requirements, including replanting per the Right-of-Way Integrated Vegetation Management Policy. 3) Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action. 4) Perform and document long-term monitoring of on-site restoration.	1) Design 2) Design 3) Construction 4) Post-construction
		Implement Mitigation Measures M-BI-1a (General Protection Measures), M-BI-1b (Worker Training and Awareness Program), and M-BI-1c (Prepare and Implement a Vegetation Restoration Plan).	See respective mitigation measures			

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BI-3	Construction of the proposed project could have a substantial adverse effect on jurisdictional waters.	**M-BI-3: Avoidance and Protection Measures for Jurisdictional Water Bodies** This mitigation measure applies to the Colma, San Bruno South, and Millbrae sites. The SFPUC and its contractors shall minimize impacts on waters of the United States and waters of the State by implementing the following measures: • Erosion and sedimentation control measures such as a silt fence shall be installed adjacent to all water conveyance features to be avoided within 100 feet of any proposed construction activity, and signs installed indicating the required avoidance. If a 100 foot setback is not feasible due to field constraints, the project biologist or qualified environmental inspector will work with the contractor to determine where the silt fence erected for perimeter control should be placed, and what additional erosion and sedimentation controls, such as sediment traps, may be required to prevent construction spoils and sediment from leaving the work area. No equipment mobilization, grading, clearing, or storage of equipment or machinery, or similar activity, shall occur until a representative of the SFPUC has inspected and approved the fencing installed around these features. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed. No construction activities, including equipment movement, material storage, or temporary spoil stockpiling, shall be allowed within the fenced areas protecting water features. • Exposed slopes shall be stabilized immediately upon the completion of construction activities.	1) SFPUC EMB 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Design project to minimize disturbance to waters of the United States and state. Ensure appropriate language is included in contract documents. 2) Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action.	1) Design 2) Construction
		Implement Mitigation Measures M-BI-1a (General Protection Measures), M-BI-1b (Worker Training and Awareness Program), and M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).	See respective mitigation measures			

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BI-4	Construction of the proposed project could be inconsistent with local policies or ordinances protecting biological resources, including trees.	**M-BI-4: Replacement of Trees to Be Removed** This mitigation measure applies to the South San Francisco and San Bruno North sites only, where affected trees meet the parameters of the applicable ordinance outlined in the summary table below. The SFPUC will avoid and minimize impacts on ordinance-protected trees by implementing the following measures: • A tree survey will be conducted prior to construction by a qualified arborist (defined as an International Society of Arboriculture certified arborist or consulting arborist who is a member of the America Society of Consulting Arborists) or a qualified biologist to identify the protected and heritage trees within the project footprint. Protected trees and heritage trees are defined in Table 5.14 6 (on the following page) for the City of South San Francisco and the City of San Bruno. • Removal of ordinance-protected trees or work within the dripline of such trees will be avoided to the extent feasible during construction. If construction must occur within the dripline of a tree, a qualified arborist will determine where the protective fencing should be placed in order to protect the tree. • Where feasible, native trees to be removed that are located within the existing SFPUC ROW, shall be replaced according to the SFPUC's Right of Way Integrated Vegetation Management Policy. If it is not feasible to compensate for all native tree removal in SFPUC's ROW in the vicinity of the project, then native tree compensation shall occur at a suitable offsite location. • For each removed landscape tree that meets ordinance criteria, the SFPUC shall plant two 24-inch box size trees or one 36-inch box size replacement tree of similar species. If replanting trees on the same site is infeasible, the SFPUC shall find a suitable alternative location. • A qualified biologist or arborist shall conduct post-construction monitoring of replacement trees for 5 years. Any replacement trees that fail within the first 5 years shall be replaced. The survival period shall be extended, as necessary, until the planted trees have survived for a period of 5 years, and show signs that they are permanently established.	1) SFPUC EMB 2) SFPUC BEM (qualified arborist) 3) CM Team 4) SFPUC NRLMD/BEM	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC NRLMD/BEM	1) Ensure that contract documents include protection of ordinance trees. 2) Obtain and review resume or other documentation of consulting arborist's qualifications. Conduct surveys. Document activities in monitoring logs. 3) Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action. 4) Replant trees or provide compensation for trees. Perform and document long-term monitoring of restoration.	1) Design 2) Pre-construction 3) Construction 4) Post-construction

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<tr><th rowspan="2">Impact No.</th><th rowspan="2">Impact Summary</th><th rowspan="2">Adopted Mitigation Measures</th><th colspan="4">Monitoring and Reporting Program</th></tr>
<tr><th>Responsible Party</th><th>Reviewing and Approval Party</th><th>Monitoring and Reporting Actions</th><th>Implementation Schedule</th></tr>
<tr><td>BI-4
(cont.)</td><td></td><td>Summary of Applicable Tree Ordinances
<table>
<tr><th>City</th><th>Protected Trees</th></tr>
<tr><td>South San Francisco</td><td>• Any tree with a circumference of 48 inches or more when measured 54 inches above natural grade; or
• A tree or stand of trees so designated based upon findings that it is unique and of importance to the public due to its unusual appearance, location, or historical significance; or
• A stand of trees whereby each tree is dependent upon the others for survival.</td></tr>
<tr><td>San Bruno</td><td>• Any native bay (Umbellularia californica), buckeye (Aesculus species), oak (Quercus species), redwood, or pine tree that has a diameter of 6 inches or more measured at 54 inches above natural grade;
• Any tree or stand of trees designated by resolution of the City Council to be of special historical value or of significant community benefit;
• A stand of trees, the nature of which makes each dependent on the others for survival; or
• Any other tree with a trunk diameter of 10 inches or more, measured at 54 inches above natural grade.</td></tr>
</table></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Implement Mitigation Measure M-BI-1a (General Protection Measures).</td><td colspan="4">See Mitigation Measure M-BI-1a</td></tr>
<tr><td>C-BI</td><td>Implementation of the project could result in a cumulatively considerable contribution to cumulative impacts on biological resources during project construction.</td><td>Implement Mitigation Measures M-BI-1a (General Protection Measures), M-BI-1b (Worker Training and Awareness Program), M-BI-1c (Prepare and Implement a Vegetation Restoration Plan), M-BI-1d (Minimize Disturbance to Nesting Birds and Raptors), M-BI-1e (Pre-construction Surveys for Special-Status Bats and Avoidance and Minimization Measures), M-BI-1f (Mitigation for the Mission Blue Butterfly), M-BI-1g (Mitigation for San Francisco Dusky-Footed Woodrat Middens), M-BI-1h (Mitigation for the California Red Legged Frog), M-BI-2a (Minimize Disturbance to Riparian Habitat), M-BI-2b (Supplemental Measures for the Vegetation Restoration Plan), M-BI-3 (Avoidance and Protection Measures for Jurisdictional Water Bodies), M-BI-4 (Replacement of Trees to Be Removed), and M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).</td><td colspan="4">See respective mitigation measures</td></tr>
<tr><td colspan="7">Geology and Soils</td></tr>
<tr><td>GE-1</td><td>The project construction could result in substantial soil erosion or the loss of topsoil.</td><td>Implement Mitigation Measures M-BI-1a (General Protection Measures) and M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).</td><td colspan="4">See respective mitigation measures</td></tr>
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C-GE	Project construction could result in a cumulatively considerable contribution to cumulative impacts related to geology and soils.	Implement Mitigation Measures M-BI-1a (General Protection Measures) and M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).	See respective mitigation measures			
Hydrology and Water Quality						
HY-1	Project construction could substantially violate water quality standards or waste discharge requirements or degrade water quality as a result of erosion and sedimentation or an accidental release of hazardous chemicals.	**M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan** This mitigation measure applies to all project sites, as well as the common staging area. In accordance with the Construction General Permit, the SFPUC or its contractor(s) would submit the required notices, prepare a SWPPP, and implement site-specific BMPs to control and reduce discharges of sediments and pollutants associated with construction stormwater runoff that could discharge to storm drains or creeks. BMPs would include, but are not limited, to the following. ***Scheduling*** • Schedule construction to minimize ground disturbance during the rainy season to the extent practicable. • Install erosion and sediment control BMPs prior to the start of any ground-disturbing activities. • Provide plans to stabilize soil with vegetation or physical means in the event that rainfall is expected. Stabilize all disturbed soils as soon as possible following the completion of soil-disturbing activities. ***Erosion and Sedimentation*** • Install silt fences or fiber rolls, or implement other suitable measures around the perimeters of the construction zone, staging areas, temporary stockpiles, and drainage features. • Use filter fabric or other appropriate measures to prevent sediment from entering storm drain inlets.	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents require that the contractor design, install, and maintain stormwater controls and prepare a SWPPP. 2) Review SWPPP to ensure that it complies with the requirements and submit to RWQCB per the Construction General Permit. 3) Monitor to ensure the contractor implements the measures in the contract documents and SWPPP including reporting per the Construction General Permit. Ensure contractor performs post-construction BMPs. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction/Post Construction

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HY-1 (cont.)		• When dewatering, regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow. • Detain and treat water produced by construction site dewatering using sedimentation basins, sediment traps (when water is flowing and there is sediment), or other measures, to ensure that discharges to receiving waters meet applicable water quality objectives. • Locate stockpiles a minimum of 50 feet away from concentrated flows of stormwater, water bodies, ditches, and inlets. Contain all stockpiles using perimeter controls such as berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale barriers. Cover all stockpiles with visqueen or other impermeable materials. • Preserve existing vegetation in areas where no construction activity is planned or where construction activity will occur at a later date. • Stabilize and revegetate disturbed areas as soon as possible after construction by planting or seeding and/or using mulch (e.g., straw or hay, erosion control blankets, hydromulch, or other similar material). • LUP [linear underground/overhead projects] dischargers shall provide effective soil cover for inactive areas and all finished slopes, and utility backfill. • Install slope breakers at spacing intervals required by the RWQCB. ***Nonstormwater Control*** • Prevent raw cement, concrete or concrete washings, asphalt, paint or other coatings, and oils or other petroleum products from entering watercourses or storm drains. If possible, all concrete waste and wash water should be returned with each concrete truck for disposal at the concrete batch plant. • Locate the entrance and exit pit at each end of the jack-and-bore construction area at least 10 feet from the creek, ditch, or canal. • Cofferdam materials used to create dams upstream and downstream of diversion should be erosion-resistant and could include materials such as steel plate, sheetpile, sandbags, continuous berms, inflatable or water bladders. • Keep construction vehicles and equipment clean; do not allow excessive buildup of oil and grease. • Check construction vehicles and equipment daily at startup for leaks, and repair any leaks immediately. • To prevent run-on and runoff and to contain spills, do not refuel vehicles and equipment within 100 feet of surface waters.				

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HY-1 (cont.)		• Conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility. • Contain fueling areas to prevent run-on and runoff and to contain spills. ***Tracking Controls*** • Grade and stabilize construction site entrances and exits to prevent runoff from the site, and to prevent erosion. • Employ street sweeping to remove any soil or sediment tracked off paved roads during construction. ***Waste Management and Hazardous Materials Pollution Controls*** • Control the discharge of pollutants in stormwater from vehicles and equipment by using drip pans, spill kits, berms, and secondary containment. • Remove trash and construction debris from the project area regularly. Provide an adequate number of waste containers with lids or covers to keep rain out of the containers, and to prevent trash and debris from being blown away during high winds. • Locate sanitary facilities a minimum of 200 feet from creeks. • Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the stormwater drainage system or receiving water. • Maintain sanitary facilities regularly. • Store all hazardous materials in an area protected from rainfall and stormwater run-on, and prevent the offsite discharge of leaks or spills. • Minimize the potential for contamination of surface water bodies by maintaining spill containment and cleanup equipment onsite, and by properly labeling and disposing of hazardous wastes. • Inspect dumpsters and other waste and debris containers regularly for leaks, and remove and properly dispose of any hazardous materials and liquid wastes placed in these containers. • Train construction personnel in proper material delivery, handling, storage, cleanup, and disposal procedures.				

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HY-1 (cont.)		***BMP Inspection, Maintenance, and Repair*** • Inspect all BMPs on a regular basis to confirm proper installation and function. • Inspect all stormwater BMPs daily during storms. • Inspect sediment basins, sediment traps, and other detention and treatment facilities regularly throughout the construction period. • Provide sufficient devices and materials (e.g., silt fence, fiber rolls, and erosion blankets) throughout project construction to enable immediate repair or replacement of failed BMPs. • Inspect all seeded areas regularly for failures, and remediate or repair as soon as feasible. ***Permitting, Monitoring, and Reporting*** • Provide the required documentation for SWPPP inspections, maintenance, and repair requirements. • Maintain written records of inspections, spills, BMP-related maintenance activities, corrective actions, and visual observations of any offsite discharge of sediment or other pollutants, as required by the RWQCB. • Monitor water quality to assess the effectiveness of control measures. • Notify the RWQCB and other agencies as required (e.g., California Department of Fish and Wildlife, California Emergency Management Agency) if the criteria for turbidity, oil/grease, or foam are exceeded, and undertake corrective actions. • Immediately notify the RWQCB and other agencies as required (e.g., California Department of Fish and Wildlife) of any spill of petroleum products or other organic or earthen materials, and undertake corrective action. ***Post-Construction BMPs*** • Revegetate all temporarily disturbed areas as required after construction activities are completed. • Remove any remaining construction debris and trash from the project area and staging areas upon project completion. • Phase the removal of temporary BMPs as necessary to ensure stabilization of the site. • Maintain post-construction site conditions to avoid any unintended drainage channels, erosion, or areas of sedimentation. • Correct post-construction site conditions as necessary to comply with the SWPPP and any other pertinent RWQCB requirements. The SWPPP will be provided for review and comment, upon request, to the jurisdictions in which the project is located.				

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C-HY	Project construction could result in a cumulatively considerable contribution to cumulative impacts on hydrology and water quality.	Implement Mitigation Measure M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).	See Mitigation Measure M-HY-1			
Hazards and Hazardous Materials						
HZ-2	Project construction could 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.	**M-HZ-2a: Prepare and Implement a Hazardous Material Handling and Disposal Plan** This mitigation measure applies to all project sites, as well as the common staging area. The contractor shall prepare, submit to SFPUC, and implement a Hazardous Material Handling and Disposal Plan during the construction of the project. The Hazardous Material Handling and Disposal Plan shall include, but would not be limited to, the following information: • Results of the pre-construction hazardous assessment and descriptions of potential hazardous wastes to be generated. • Onsite waste management protocols, which will require that all excavated materials suspected of being hazardous be inspected prior to initial stockpiling, and that excavated materials that are visibly stained, have noticeable odor, and/or are known or suspected to contain contaminants be stockpiled separately, to minimize the amount of material that may require special handling. • Hazardous waste characterization protocols, and waste profiling and acceptance criteria. To properly evaluate suspected contaminated soil, a qualified professional will collect a representative sample and submit it to a California-certified laboratory for analysis of contaminants-of-concern. The analytical results will be used to classify the spoils as hazardous or nonhazardous waste, in accordance with applicable federal and state laws and regulations for offsite disposal at an appropriate disposal facility or for onsite reuse. • Transportation and disposal for hazardous wastes in accordance with applicable federal and state regulations. • Hazardous waste management documentation and reporting.	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents include the requirement that the contractor prepare and implement a Hazardous Material Handling and Disposal Plan. 2) Review the plan to ensure that it complies with requirements. 3) Monitor to ensure that the contractor implements the measures in the contract documents and the plan. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction

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HZ-2 (cont.)		**M-HZ-2b: Develop and Implement a Hazardous Material Business Plan** This mitigation measure applies to all project sites, as well as the common staging area. A Hazardous Material Business Plan (HMBP) shall be required when any of the following conditions are met: • 55 gallons or more of liquid hazardous material, such as fuel products, are present on site at any one project site; • 500 pounds of solid hazardous material are present at any one project site; • 200 cubic feet of compressed gases including flammable gases for welding are present at any one project site; • Any amount of an extremely hazardous substance is present, as specified in 40 CFR Part 355, Appendix A or B; or • Any amount of radiological materials that are present in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40, or 70. In the event that the above criteria are applicable to the construction activities, the contractor will prepare, submit to SFPUC, and implement a HMBP for the construction. The HMBP shall be certified by a qualified professional (such as a California-licensed civil engineer) from the contractor, and will include step-by-step procedures for the use, storage, and handling of hazardous materials during construction. The HMBP shall include, but not be limited to, the following elements: • Descriptions of planned operation for which the HMBP is applicable; • Procedures for handling, transporting, storing, and disposing all hazardous materials used for the project component activities; • Location where the hazardous materials are stored; • Spill prevention protocols; • Protocols including response equipment to address any accidental spill and releases of hazardous materials to be used during the operation; • Personnel training requirement to implement the HMBP; and • Emergency response and spill contingency protocols to address any emergencies and contingencies resulting from hazardous chemicals or waste from the project components. The HMBP will be prepared in compliance with the requirements of the local environmental department (San Mateo County, SMCEH Division).	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents include the requirement that the contractor prepare and implement a Hazardous Material Business Plan that is certified by a qualified professional (e.g., CA licensed civil engineer.) 2) Review the plan to ensure that it complies with requirements. 3) Monitor to ensure that the contractor implements the measures in the contract documents and the plan. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction

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HZ-2 (cont.)		**M-HZ-2c: Develop and Implement an Health and Safety Plan** This mitigation measure applies to all project sites, as well as the common staging area. This mitigation measure will be applicable when any of the following conditions is observed: • Handling of hazardous materials during construction is required; • Visual signs of hazardous wastes are observed during construction; or • Potential presence of hazardous wastes is anticipated for the construction activities. Prior to the start of any construction activities, the contractor shall prepare, submit to SFPUC, and implement a Health and Safety Plan (HASP) to address chemical hazards identified for the construction. The contractor shall not start any construction activities until the contractor receives SFPUC's notification that all submittal requirements regarding the health and safety plan have been fulfilled in accordance with the project contract bid and specification documentation. The HASP shall be consistent with all applicable CCR Title 8 or other applicable regulations and SFPUC's health and safety requirements. The HASP shall establish, in detail, the protocols necessary for the recognition, evaluation, and control of all hazards associated with the construction activities performed by the contractor and its subcontractors. The HASP will include, but not be limited to, the following major elements: • Chemicals to be encountered, handled, or used; • Chemical hazard analyses to identify potential health and safety hazards associated with the chemicals identified for the project; • Chemical action levels for site worker safety; • Name and qualifications of all the site health and safety personnel designated for the project; • Health and safety organization for the project including, but not limited to, lines of authority, responsibility, and communication protocols • Worker safety monitoring requirement and protocols; • Confined space entry permit and plan, if applicable; • Crane critical lift plan, if applicable; • Fall protection and prevention plan; • Personal protective equipment; • Emergency response and contingency planning procedures, including emergency and first aid equipment; and information on the nearest emergency room, including address, phone number, and routing from each of the project sites; and • Inspection, incident investigation, and reporting requirements, including documentation and record keeping procedures.	1) SFPUC EMB 2) CM Team 3) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM	1) Ensure that contract documents include the requirement that the contractor prepare and implement a Health and Safety Plan. 2) Review the plan to ensure that it complies with requirements. 3) Monitor to ensure that the contractor implements the measures in the contract documents and the plan. Report noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Construction

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HZ-2 (cont.)		Implement Mitigation Measure M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).	See Mitigation Measure M-HY-1			
C-HZ	Construction of the proposed project could result in a cumulatively considerable contribution to cumulative impacts related to hazards and hazardous materials.	Implement Mitigation Measures M-HZ-2a (Prepare and Implement a Hazardous Material Handling and Disposal Plan), M-HZ-2b (Develop and Implement a Hazardous Material Business Plan), M-HZ-2c (Develop and Implement a Health and Safety Plan), and M-HY-1 (Preparation and Implementation of a Storm Water Pollution Prevention Plan).	See respective mitigation measures			
Improvement Measures						
Improvement Measure I-TR-A: Pre-construction Parking Survey at San Bruno North Site Develop and implement a pre-construction survey of on-street parking supply and demand during the time frames when construction workers are expected to park in the vicinity of the San Bruno North site. The pre-construction on-street parking survey would be conducted on residential streets to the south of San Bruno Avenue West where on-street parking is permitted (for example, Cherry Avenue, Hickory Avenue, and Cedarwood Court), and results of the survey shall be submitted to the City of San Bruno. The SFPUC shall coordinate with the City of San Bruno regarding the feasibility and location of construction worker vehicle parking on residential streets.		1) SFPUC EMB 2) SFPUC Communications 3) CM Team 4) CM Team	1) SFPUC BEM 2) SFPUC BEM 3) SFPUC BEM 4) SFPUC BEM	1) Develop and implement a preconstruction survey at San Bruno North Site. 2) Ensure that survey results are submitted to the City of San Bruno. 3) Coordinate with City of San Bruno regarding the feasibility and location of construction worker vehicle parking on residential streets at San Bruno North Site 4) Monitor to ensure that the contractor implements agreed construction worker vehicle parking locations including submittals to SFPUC BEM regarding noncompliance and ensure corrective action.	1) Design 2) Pre-construction 3) Pre-construction/ Construction 4) Construction
Improvement Measure I-TR-B: Monitoring of Westbound Left-Turn Lane from San Bruno Avenue West onto Shelter Creek Lane At the San Bruno South site, SFPUC shall, in coordination with the City of San Bruno, develop and implement a monitoring plan for the intersection of Crestmoor Drive/San Bruno Avenue West/Shelter Creek Lane (Intersection #4), to determine whether construction vehicles traveling to the site spill back from the westbound left-turn lane onto San Bruno Avenue West, and develop strategies to reduce the potential for spillback. These strategies could include scheduling of construction vehicles to ensure arrival throughout the hour (rather than multiple trucks following each other); changes in signal timing during the nonpeak hours to provide additional green time for westbound traffic flow; requiring construction vehicles arriving via I-280 southbound to use the I-280 off-ramp at Cunningham Way; and other strategies developed with the City of San Bruno.		1) SFPUC EMB/SFPUC Communications 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Develop a monitoring plan for the intersection of Crestmoor Drive/San Bruno Avenue West/Shelter Creek Lane in coordination with the City of San Bruno. 2) Implement and monitor plan including submittals to SFPUC BEM regarding noncompliance and ensure corrective action.	1) Pre-construction 2) Construction
Improvement Measure I-TR-C: Coordinate On-street Parking at the Millbrae Site Coordinate with the City of Millbrae regarding construction worker vehicle parking on residential streets.			1) CM Team 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Coordinate with City of Millbrae regarding the feasibility and location of construction worker vehicle parking on residential streets in Millbrae. 2) Monitor to ensure that the contractor implements agreed construction worker vehicle parking locations including submittals to SFPUC BEM regarding noncompliance and ensure corrective action.	1) Pre-construction 2) Construction

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Improvement Measure I-TR-D: Monitoring Plan for the Unsignalized Intersection of the I-280 Ramps/Cunningham Way At the San Bruno South site, the SFPUC shall, in coordination with the City of San Bruno, develop and implement a monitoring plan for the unsignalized intersection of the I-280 ramps/Cunningham Way to determine whether traffic controls such as using a flagger or installing and operating a temporary traffic signal are warranted during PPSU San Bruno South construction activities.			1) SFPUC EMB/SFPUC Communications 2) CM Team	1) SFPUC BEM 2) SFPUC BEM	1) Develop a monitoring plan at the unsignalized intersection of the I-280 ramps/Cunningham Way in coordination with the City of San Bruno. 2) Implement and monitor plan including submittals to SFPUC BEM regarding noncompliance and ensure corrective action.	1) Pre-construction 2) Construction

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