



# SAN FRANCISCO PLANNING DEPARTMENT

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## Preliminary Mitigated Negative Declaration

*Date:* November 20, 2014  
*Case No.:* **2014.0956E**  
*Project Title:* **Little Yosemite Fish Passage Project**  
**Unincorporated Alameda County**  
*Zoning:* Parklands  
*Block/Lot:* Not Applicable – in an undeveloped area  
*Lot Size:* Not Applicable – in an undeveloped area  
*Project Sponsor:* San Francisco Public Utilities Commission  
Yin Lan Zhang – (415) 487-5201  
YZhang@sfgov.org  
*Staff Contact:* Steve Smith – (415) 558-6373  
Steve.Smith@sfgov.org

1650 Mission St.  
Suite 400  
San Francisco,  
CA 94103-2479

Reception:  
**415.558.6378**

Fax:  
**415.558.6409**

Planning  
Information:  
**415.558.6377**

### PROJECT DESCRIPTION:

The San Francisco Public Utilities Commission (SFPUC) is proposing the Little Yosemite Fish Passage Project to improve upstream passage conditions for adult anadromous steelhead (*Oncorhynchus mykiss*) along a 0.4-mile long reach of Alameda Creek referred to as Little Yosemite. Proposed improvements would be constructed in accordance with the Biological Opinion issued by the National Marine Fisheries Service for the Calaveras Dam Replacement Project. They include constructing concrete weirs shaped like natural boulders or bedrock in three strategically located water features. Select boulders would also be cut or removed and some holes, or slots through large boulders, may be filled with concrete to stabilize landing pools at the tops of waterfalls along the fish migration path. The project site is located off of Camp Ohlone Road in unincorporated Alameda County, approximately 2.6 miles downstream of the Alameda Creek Diversion Dam and the Alameda Creek Diversion Tunnel. The Little Yosemite area is located in the Sunol Regional Wilderness on property owned by the City and County of San Francisco that is leased to East Bay Regional Park District. Construction of the proposed project would begin in April 2016 and would take approximately 4 months. Construction activities would generally occur Monday through Friday, 8:00 a.m. to 5:00 p.m.

### FINDING:

This project could not have a significant effect on the environment. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and 15070 (Decision to prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached. Mitigation measures are included in this project to avoid potentially significant effects. See Initial Study Section E, Evaluation of Environmental Effects.

cc: Yin Lan Zhang, SFPUC

# INITIAL STUDY

## Little Yosemite Fish Passage Project Case Number 2014.0956E

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## Acronyms and Abbreviations

AB	Assembly Bill
ACDD	Annual average daily traffic
ACDT	Alameda Creek Diversion Tunnel
ACRPS	Alameda Creek Recapture Pump Station
ARB	California Air Resources Board
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BMPs	best management practices
C-APE	CEQA Area of Potential Effects
CAA	Clean Air Act
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CCAA	California Clean Air Act
CCAP	Community Climate Action Plan
CCR	California Code of Regulation
CCSF	City and County of San Francisco
CDC	California Department of Conservation
CDRP	Calaveras Dam Replacement Project
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMP	Congestion Management Plan
CNEL	community noise equivalent level
CO	carbon monoxide
Corps	US Army Corps of Engineers
CWA	Clean Water Act
dba	A-weighted decibels
DPM	diesel particulate matter
EBRPD	East Bay Regional Park District
EIR	Environmental Impact Report
EP	Environmental Planning
ERO	Environmental Review Officer
FARR	Final Archeological Resources Report
FTA	Federal Transportation Administration
GHG	greenhouse gases
HOV	highway occupancy vehicle
I-	Interstate Highway
in/sec	inches per second
IS	Initial Study



IS/MND	Initial Study/Mitigated Negative Declaration
lbs	pounds
Ldn	day-night noise level
Lmax	maximum sound level
LOS	level of service
MLD	most likely descendant
MND	Mitigated Negative Declaration
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NIT	New Irvington Tunnel
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NSR	New Source Review
NWIC	Northwest Information Center
PM	particulate matter
PM <sub>10</sub>	particulate matter, less than 10 microns in diameter
PM <sub>2.5</sub>	fine particulate matter, less than 2.5 microns in diameter
PMND	Preliminary Mitigated Negative Declaration
PPV	peak particle velocity
PRC	Public Resources Code
QSD	Qualified SWPPP Developer
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SABPL	San Antonio Backup Pipeline
SB	Senate Bill
SCH	State Clearinghouse
SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission
SO <sub>2</sub>	sulfur dioxide
SR	State Route
SVP	Society of Vertebrate Paleontology
SVWTP	Sunol Valley Water Treatment Plant
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
USEPA	U.S. Environmental Protection Agency
WMP	Alameda Watershed Management Plan
WSIP	Water System Improvement Program
µg/m <sup>3</sup>	micrograms per cubic meter

# INITIAL STUDY

## Little Yosemite Fish Passage Project Case Number 2014.0956E

### A. PROJECT DESCRIPTION

The San Francisco Public Utilities Commission (SFPUC) is proposing the Little Yosemite Fish Passage Project (the project), which is intended to improve upstream passage conditions for adult anadromous steelhead (*Oncorhynchus mykiss*) along a 0.4-mile-long reach of Alameda Creek referred to as Little Yosemite.

This Initial Study (IS)/Mitigated Negative Declaration (MND) is intended to provide the information and analysis necessary to assist public agency decision-makers in considering the approvals necessary for the planning, development, and construction of the project.

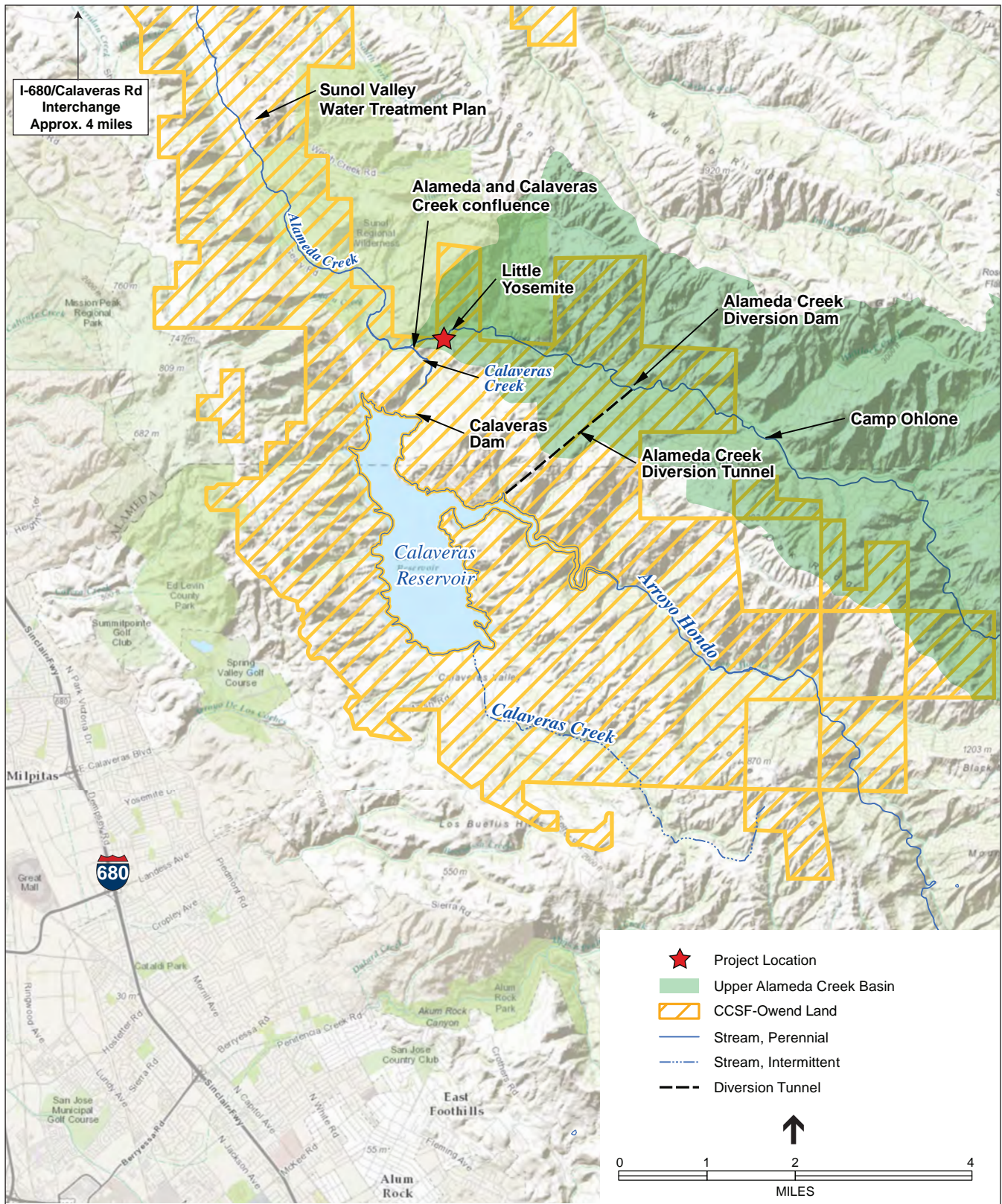
#### A.1 Project Site Location

The project site is located off of Camp Ohlone Road, approximately 6.5 miles southeast of the intersection of Calaveras Road and Interstate 680 (I-680) and 3 miles southeast of the Sunol Valley Water Treatment Plant (see **Figure 1**) in unincorporated Alameda County. The project site, which is within the Little Yosemite area, is approximately 1 mile north of the Calaveras Dam and approximately 2.6 miles downstream of the Alameda Creek Diversion Dam (ACDD) and the Alameda Creek Diversion Tunnel (ACDT).

The project site is located in the Sunol Regional Wilderness on property owned by the City and County of San Francisco that is leased to the East Bay Regional Park District (EBRPD). With the exception of a couple of picnic tables and a portable toilet structure located north of Staging Area 3, there are no existing buildings or structures located within the project site or its vicinity.

#### A.2 Project Background

Currently, the ACDD represents a barrier to upstream fish migration. As part of the SFPUC's Calaveras Dam Replacement Project (CDRP), currently under construction, it was proposed that the ACDD and its operation be modified to benefit a future run of steelhead in Alameda Creek, and that fish passage improvements be designed for the downstream Little Yosemite reach. This 0.4-mile-long reach of natural stream channel has a steep gradient, and the exposed bedrock and large boulders present potential impediments to fish immigration. The Biological Opinion issued by the National Marine Fisheries Service (NMFS) for the CDRP requires the SFPUC to develop plans (described herein as the project) to physically modify impediments to adult steelhead migration in the Little Yosemite reach, and to facilitate a future run of steelhead in Alameda Creek upstream of Little Yosemite. In 2006, the SFPUC conducted a field



SOURCE: URS, 2013

Little Yosemite Fish Passage Project . 120468.04

**Figure 1**  
Project Vicinity

evaluation at Little Yosemite to identify specific fish passage impediments. Based on that evaluation and subsequent field work, three locations within the project area were targeted for design of fish passage improvements and are referred to as Features 9, 10, and 11 throughout this document (see **Figure 2**).

In 2011, the SFPUC worked collaboratively with NMFS to develop performance criteria for fish passage improvements in the Little Yosemite reach, as required by the Biological Opinion. These criteria were developed to guide design of the proposed fish passage improvements and are based on evaluation of readily accessible literature sources, data provided by various organizations, and an analysis of hydrologic conditions in Alameda Creek. To apply the performance criteria to the lowest possible adult steelhead performance capabilities and maximize passage opportunities for the greatest number of fish, the performance criteria pertain to steelhead ranging in size from 18 to 25 inches. Furthermore, based on calculated maximum-burst swimming speeds, which account for a speed reduction due to loss in physical condition that may occur during the migration, it was concluded that small- and medium-sized steelhead arriving at Little Yosemite should be able to leap obstacles ranging from approximately 3 to 6 feet in height, respectively. This range of performance capability was used to assess passage at the three features and inform design of the project.

In 2012, existing conditions at all three locations were characterized using a combination of topographic surveys and flow mapping, which provided the basis for the fish passage assessment and calibration data for development of a HEC-RAS model (the U.S. Army Corps of Engineers Hydrologic Engineering Center's River Analysis System) for Features 9, 10, and 11. Existing fish conditions were subsequently characterized for each feature, which ultimately informed design of the proposed project.

Prior to selection of the project's design, other options that were considered and developed based on the NMFS Biological Opinion for the CDRP include (1) construction of boulder weirs<sup>1</sup> and (2) cutting, and chipping of existing rock. The advantages of both of these options include their use of natural materials and their limited effects on visual resources. The boulder weir option was eliminated from further consideration for the following reasons: difficulty placing the rocks at the specified location and elevation; uncertainty of hydraulics and fish passage conditions; and the risk of boulders being relatively mobile, resulting in a short design life. Additionally, this option would require use of a skyline yarding system, a technique in which boulders are transported on a suspended steel cable from various locations and individual boulders are placed via a pulley system. This particular system would limit the size of rock used. The chipping of existing rock option was eliminated from further consideration due to associated risks of destabilizing the feature and the risk of negatively altering or draining the fish landing pool upstream of the falls.

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<sup>1</sup> A boulder weir is a basic grade control structure that raises the water level or diverts its flow.





SOURCE: URS, 2013

Little Yosemite Fish Passage Project . 120468.04

**Figure 2**  
Project Location

### A.3 Project Purpose and Objectives

The purpose of the project is to fulfill permit conditions of the NMFS Biological Opinion issued for the SFPUC's CDRP by physically modifying impediments to steelhead migration in the Little Yosemite reach and to facilitate a future run of steelhead in Alameda Creek upstream of Little Yosemite. The objective of the project is to facilitate a future run of steelhead in Alameda Creek upstream of Little Yosemite.

### A.4 Project Characteristics

#### A.4.1 Design

The project would involve constructing concrete weirs shaped like natural boulders or bedrock that would be strategically installed at Features 9, 10, and 11.<sup>2</sup> The locations of Features 9, 10, and 11 are shown in Figure 2. **Figure 3** shows the proposed staging areas and improvements at each site. Photos of the three fish passage features are presented in **Figure 4**. **Figure 5** presents the typical design detail of the proposed concrete weirs and a photo example of artificial boulders formed of concrete. These weirs would reduce water surface drops, create new pools, and deepen existing pools for leaping. Other modifications would include removing select boulders from existing pools to increase pool depth for leaping, and plugging holes at other locations. Specific improvements proposed at each site are described as follows:

- **Proposed Improvements at Feature 9.** At Feature 9, proposed improvements include (1) constructing a new concrete tailwater<sup>3</sup> weir to raise the tailwater pool below the weir, and (2) constructing a new concrete step weir below Passageway B Falls (shown in Figure 4) to reduce the height of individual water surface drops and increase pool depth for leaping. These modifications are expected to substantially improve upstream passage conditions for adult steelhead at fish passage flows of 14 to 150 cubic feet per second (cfs) by increasing pool depths and decreasing water surface drops.<sup>4</sup>
- **Proposed Improvements at Feature 10.** Proposed improvements at Feature 10 include (1) constructing a tailwater weir across the flow constrictions in Passageway A (shown in Figure 4) to raise water levels in the pool below Passageway A and flood a newly formed hole under a boulder, (2) cutting a boulder at the crest of Passageway A Falls to lower the water surface drop over the falls and improve fish leaping conditions, (3) constructing a new concrete step weir to reduce the water surface drop over Passageway B Falls and Passageway C Falls, and (4) plugging a large hole between boulders at the top of Passageway B with concrete to reduce the risk of "fallback" as fish migrate upstream. As at Feature 9, the proposed changes would improve upstream passage conditions for adult steelhead at flows between 14 cfs and 150 cfs by increasing pool depths and decreasing water surface drops.

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<sup>2</sup> URS, Michael Love & Associates, and HDR, 2013. Conceptual Engineering Report – Fish Passage at the Little Yosemite Reach of Alameda Creek, prepared for San Francisco Public Utilities Commission, July 2013 (updated August 2013).

<sup>3</sup> "Tailwater" refers to waters located immediately downstream from a hydraulic structure.

<sup>4</sup> This low and high fish passage flow range represents the range of flows within which passage criteria should be met. The 14 cfs to 150 cfs flow range was defined based on statistical analysis of hydrologic data, assuming future operating conditions at ACDD and evaluation of low-flow passage conditions immediately upstream of Little Yosemite (URS et al., 2013).

- **Proposed Improvements at Feature 11.** Proposed improvements at Feature 11 include (1) constructing a new concrete tailwater weir across the bedrock constriction to raise water levels in the bedrock pool, and (2) constructing a new step weir across a bedrock knob halfway up the Passageway A cascade (shown in Figure 4) to create a small pool. These modifications would improve upstream passage conditions for adult steelhead at flows of 14 cfs to 150 cfs by converting the Passageway A cascade into pools and water surface drops, creating conditions suitable for leaping.

#### A.4.2 Construction

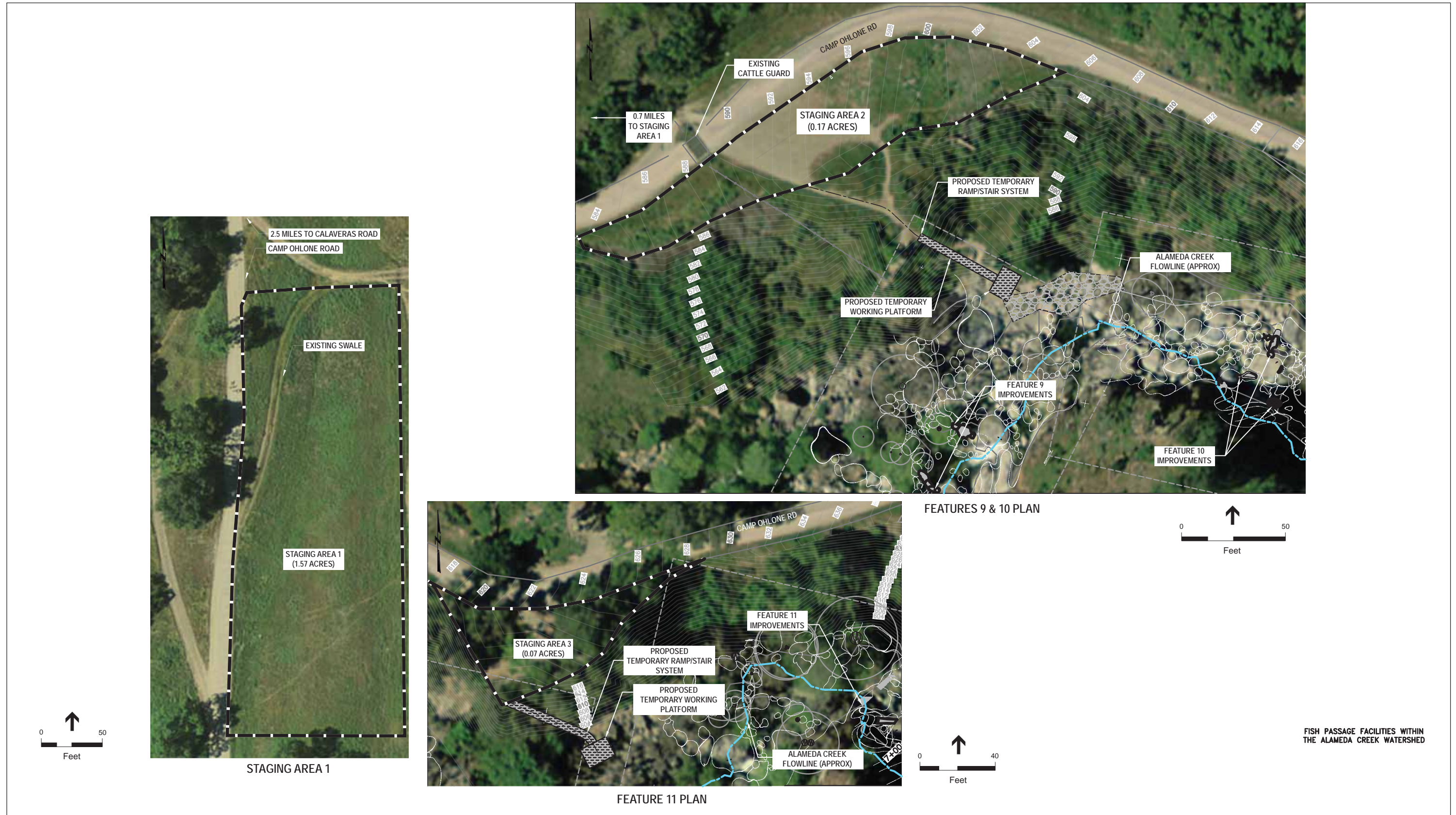
##### Construction Activities

Project construction would consist primarily of the following activities: site preparation; minor grading to accommodate footings for the temporary wood ramp/stair system and work platform, which would provide access to construction work areas; construction dewatering to facilitate construction in a manner that protects fish and other aquatic species; hand excavation; installation of rebar and dowel anchors into existing rock; delivery of concrete from pump trucks located upslope near Camp Ohlone Road; the shaping of the concrete weirs using formwork; application of a top coat; and curing of the concrete boulders. The proposed improvements would be constructed with hand tools and would not require the use of heavy equipment within Alameda creek. The extent of ground disturbing activities is summarized in **Table 1**. These activities are described more fully in the sections that follow below.

**TABLE 1  
GROUND DISTURBANCE FOR THE LITTLE YOSEMITE PROJECT**

Description	Approximate Length	Approximate Width	Maximum Depth (bgs)
Feature 9	40 feet	45 feet	5 feet
Feature 10	40 feet	45 feet	5 feet
Feature 11	45 feet	40 feet	5 feet
Staging Area 1 (near Geary Rd. Bridge)		1.57 acres	1 foot
Staging Area 2 (near Features 9 and 10)		0.07 acre	1 foot
Staging Area 3 (near Feature 11)		0.17 acre	1 foot
Site Access Improvements	55 feet near Features 9 and 10, 60 feet near Feature 11	10 to 15 feet	1 foot





SOURCE: URS, 2014

Little Yosemite Fish Passage Project . 120468.04

**Figure 3**  
Proposed Staging Areas and Improvements  
at Features 9, 10, and 11



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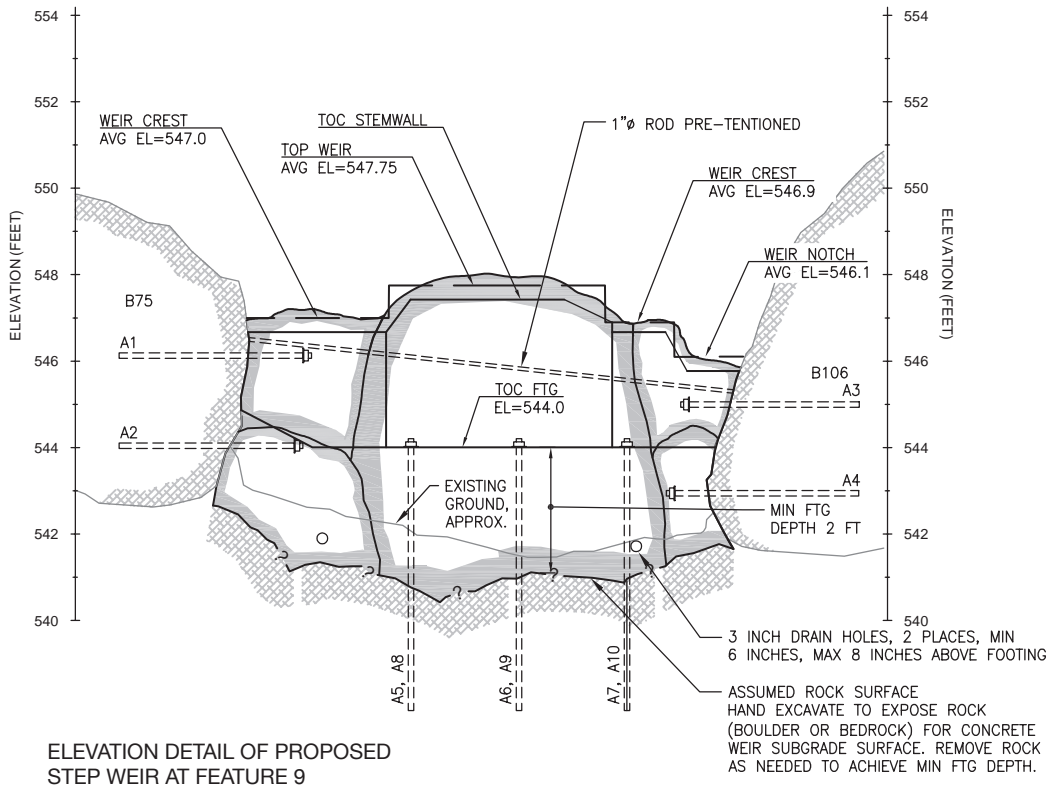
Flow plunging over Feature 9 Passageways A and B at 38.5 cfs.



Flow plunging over Feature 10 Passageways A, B, and C at 36.0 cfs.



Flow plunging over Feature 11 Passageways A and B at 34.5 cfs.



An example of an artificial boulder water feature formed entirely of concrete.

### *Site Preparation and Survey*

Prior to construction, the selected contractor would develop a site operations plan that identifies the location of construction equipment staging and support areas, site access, exclusion areas, excavation areas, and parking areas. In order to accommodate construction vehicles and equipment, Staging Area 1 may have to be cleared of existing tall grasses and graded to a level surface. The areal extent of anticipated ground disturbing activities associated with site preparation is presented in Table 1. There are no known utilities in the project site vicinity that would require clearance.

### *Site Access Improvements*

To provide adequate access to Features 9 and 10 for construction workers, an approximately 50-foot-long temporary wood ramp/stair system and work platform would be installed (see Figure 3). Similarly, at Feature 11, a temporary wood ramp/stair system and work platform would also be installed to provide access to the work area. The contractor would be responsible for designing these access improvements and would be required to meet Occupational Safety and Health Administration standards. In addition, ladders and small hoists would be used to provide access over steep boulders for both workers and materials in the streambed. A small crane may be used to transfer materials and equipment between the upland staging areas and work areas within the creek channel. The areal extent of anticipated ground disturbing activities associated with site access improvements is presented in Table 1.

### *Fish Protection and Dewatering*

At each of the three sites, fish exclusion fencing would be installed both upstream and downstream of the work areas. If present in the project site vicinity, fish would be removed and relocated in accordance with the NMFS Biological Opinion for the CDRP. Construction dewatering would occur in accordance with conditions of the NMFS Biological Opinion and standard best practices, described more fully in Section A.5, Environmental Control Measures During Construction, below. While project construction would occur during the dry season when creek water levels are typically low, SFPUC would include in its bid specifications a requirement that prior to excavation or other work in the creek channel, the contractor shall undertake measures, such as installing a water diversion structure or structures upstream of the work areas, to ensure work sites remain dry throughout construction, including in the event of an unseasonable rain event. The water diversion structure may consist of stacked sandbags and a pipe around the work area. Water would be routed around the site using gravity flow. If necessary, water within the work sites would be pumped up to treatment tanks located in the parking area at the top of the slope. Treated water would be disposed of in accordance with State regulations and permit conditions, and may be used as irrigation water for developed areas of the Sunol Regional Wilderness.

### *Tree Trimming, Excavation, and Rock Removal*

After dewatering at each site is complete, trimming of up to three trees may be required at each of the three fish passage improvement sites; no trees would be removed as part of project construction. The foundation for the concrete weirs would be prepared by removing small rocks, sand, and gravel until a suitable subgrade consisting of the surface of large boulders or bedrock is established. Hand excavation as well as “boulder-breaking” techniques would be used to remove small boulders and expose a suitable rock subgrade upon which the concrete weirs would be anchored. The areal extent of anticipated ground disturbing activities associated with excavation and rock removal is presented in Table 1. Less than 5 feet of excavation is anticipated and would be conducted as necessary to expose underlying rock for installation of foundation anchors supporting weirs.

In addition, a limited amount of rock removal would be required to deepen pools and improve fish passage hydraulics. In some areas, breaking up the rock into pieces suitable for hand removal would be necessary; in other areas, rock would be cut to obtain a desired shape. Small hand-operated tools would be used for breaking up rocks. Techniques that may be employed include use of a rock drill for drilling holes into the rock, followed by use of hydraulic splitters and expansive grouts for rock-breaking. Rock/concrete saws or chipping hammers may be used for more precise cutting of rock.

### *Concrete Weir Installation and Curing of Boulders*

Although some weirs may be shaped to resemble a boulder jam comprised of multiple boulders, they would be formed as a single concrete structure spanned with steel reinforcement and sculpted to look like surrounding boulders. The concrete weirs would be anchored to the channel bed and adjacent large boulders. Anchoring work would likely involve rebar doweled and epoxied into the rock subgrade to a specified depth.

The ends of the weirs would tie into existing large boulders or bedrock. At these locations, the weirs would be shaped to conform to the face of the adjoining boulder or bedrock. These points would be anchored with rebar doweled and epoxied into the rock. A reinforcing steel cage (epoxy-coated or stainless) would then be constructed to help form the artificial rocks. The core of the artificial rocks would subsequently be constructed with high-strength concrete. Concrete would be delivered from a concrete pump truck located upslope of each work area on the southern side of Camp Ohlone Road. A 4- to 8-inch thick topcoat would be applied and sculpted to match the texture of adjacent boulders or bedrock. The top coat would be natural-colored high-strength fiber-reinforced concrete. The concrete boulders would be cured over a 30-day period.



### *Waste Management and Disposal*

Excavated material generated from cutting in-stream boulders and hand-excavating gravel for construction of proposed weir foundations would remain within the active stream channel and spread out locally. No other excavation wastes would be generated.

### *Site Restoration*

Once construction is complete at each fish passage improvement site, the temporary ramp/stair system and work platforms would be removed and the affected areas would be restored to their approximate pre-construction conditions.

### Construction Equipment

Construction equipment and construction vehicles required for the above-described project activities would include rock drills, concrete/rock saws, rock, hydraulic splitters, dewatering pumps, shotcrete machine (also referred to as a dry-mix gunite machine), jack hammer, concrete trucks, concrete mixers, concrete pump trucks, a small crane for materials transfer between Camp Ohlone Road and the creek channel work areas, and flatbed trucks. **Table 2** summarizes the type of equipment that would be used for each construction activity.

**TABLE 2  
PRELIMINARY CONSTRUCTION SCHEDULE, EQUIPMENT, AND WORKFORCE**

<b>Activity</b>	<b>Equipment:</b>	<b>Estimated Duration (weeks)</b>
<i>Site Preparation and Survey.</i> Develop site operations plan. Locate construction staging areas, equipment and work areas, and parking areas.	Flatbed truck (1)	2
<i>Site Access Improvements.</i> Install temporary wood ramp/stair system and working platforms.	Small crane (1), hand tools (varies)	3
<i>Fish Protection and Dewatering.</i> Construct stream diversion and dewatering at each work area.	Dewatering pumps (2), hand tools (varies)	1
<i>Excavation and Rock Removal.</i> Prepare foundation for concrete weirs; break up select rocks and remove as necessary.	Small crane (1), rock drills (2), concrete/rock saws (1)	1
<i>Concrete Weir Installation and Curing of Concrete Boulders.</i> Anchor concrete weirs to channel bed and adjacent boulders; install reinforcing steel cage; deliver concrete, mold and apply topcoat; and cure boulders.	Shotcrete machine (1), concrete trucks or on-site concrete mixer (2), concrete pump truck (1), flatbed trucks (2), hand tools (varies)	9.5
Total Duration of Construction Schedule		16.5

## Construction Staging Areas

Construction staging areas would be required for temporary staging of equipment and materials. The main staging area would be located at the eastern end of the Geary Road Bridge just north of the road (see Figure 3). This 1.6-acre staging area is approximately 0.75 mile west of the project site. Temporary staging of equipment and materials would also occur at two pullouts on the eastbound side of Camp Ohlone Road adjacent to Features 9, 10, and 11, also shown on Figure 3. At the contractor's discretion, temporary fencing may be installed along the perimeter of all staging areas throughout the duration of project construction. Access down the temporary stairs to the streambed would be secured by a locked gate.

## Site Access

The project site has access from the I-680 interchange at Calaveras Road and is located approximately 6.5 miles southeast of I-680 on Geary Road. Access to the three fish passage improvement sites would be via existing foot paths from Geary Road and temporary wood ramp/stair systems. Construction vehicles would reach the project site by traveling on Calaveras Road and then turning on Geary Road and driving past the locked gate at the end, where Geary Road meets Camp Ohlone Road in the Sunol Regional Wilderness. Camp Ohlone Road is a single-lane dirt road closed to most vehicular traffic; SFPUC lessees are allowed to use the road. This road is also open to recreational pedestrian uses during the daytime. Temporary closure of Camp Ohlone Road would be required for up to 8 days during the concrete weir installation phase. SFPUC would coordinate any necessary road closures with EBRPD, and provisions would be made to ensure property owners have access to properties adjacent to Camp Ohlone Road.

## Construction Schedule and Workforce

Table 2 presents a summary of the estimated duration of construction activities. On average, 12 construction workers would be onsite, and a maximum of 20 workers would be working on any given work day. Construction is proposed to begin in April 2016 and would take approximately 4 months. Construction at each site would be phased. Activities at Feature 9 are expected to commence first, followed by activities at Features 10 and 11, respectively. Construction is expected to occur primarily during daytime hours 8:00 a.m. to 5:00 p.m., Monday through Friday; however, if needed, construction could occur between 7:00 a.m. and 7:00 p.m. No nighttime construction or weekend work is anticipated.

### *A.4.3 Operation and Maintenance*

SFPUC would undertake periodic inspections of the proposed weir structures over their estimated 20 to 30-year lifespan to evaluate the function and structural stability of these improvements, and to identify any of the following conditions that may require maintenance: shifting of adjacent boulders and gaps or leaks that may form between the rock and concrete surface; cracking or spalling (splitting caused by weathering) of the concrete from impacts; excessive wear of the concrete surface and exposure of

reinforcing steel; and flow piping around or under the weirs caused by scour of the channel bed or shifting of adjacent boulders.<sup>5</sup> The Little Yosemite segment of Alameda Creek is narrow and prone to high-energy flows, which can cause boulders within the creek channel to shift. During periods of high flow, boulders could move and become lodged in pools behind the proposed weirs; these boulders may need to be removed if they are found to inhibit fish passage.<sup>6</sup> In the unlikely event that hydraulic conditions or shifting boulders were to affect weir anchor points or damage the concrete weir structure, any necessary repair or maintenance activity would be conducted in conformance with the terms of resource agency permits and applicable environmental laws and regulations.

## A.5 Environmental Control Measures During Construction

### A.5.1 Erosion and Sediment Control

Although construction would occur during the summer months when stream flow is minimal and storms and erosion are less likely to occur, excavation work would expose soil and could increase the potential for erosion during storm events that could subsequently increase suspended sediments in the watershed downstream of the project site. As further discussed in Section E.15, Hydrology and Water Quality, the construction contractor for the project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would specify the types of standard SFPUC best management practices (BMPs) for erosion control that would be implemented to minimize erosion and reduce the potential for mobilization of sediment or other pollutants during storm events. Example BMPs for erosion control may include measures such as using straw bales and silt fences, minimizing vegetation removal, and stabilizing and revegetating disturbed areas as soon as possible.

### A.5.1 Water Quality Protection

The NMFS Biological Opinion for the Calaveras Dam Replacement Project would apply to and be implemented as a part of this project. The Biological Opinion specifies Reasonable and Prudent Measures (RPMs) that must be implemented to protect water quality and minimize potential impacts on aquatic communities. The following conditions are specified in the Biological Opinion and would be implemented as part of this project:<sup>7</sup>

- Construction equipment used within the creek channels will be checked each day prior to work within the creek channel (top of bank to top of bank) and, if necessary, action will be taken to

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<sup>5</sup> URS, Michael Love & Associates, and HDR, 2013. Conceptual Engineering Report – Fish Passage at the Little Yosemite Reach of Alameda Creek, prepared for San Francisco Public Utilities Commission, July 2013 (updated August 2013).

<sup>6</sup> Ibid.

<sup>7</sup> National Marine Fisheries Service (NMFS). 2011. Biological Opinion for the Calaveras Dam Replacement Project in Alameda and Santa Clara Counties, (Corps File No. 299790S), NMFS Tracking number 2005/07436, 5 March 2011.



prevent fluid leaks. If leaks occur during work in the channel (top of bank to top of bank), the Corps, the permittee, or their contractor will contain the spill and remove the affected soils.

- Once construction is completed, all temporary project-introduced material (e.g., pipe, gravel, cofferdam, sandbags, etc.) must be removed, leaving the creeks as they were before construction. Excess materials will be disposed of at an appropriate disposal site.
- In areas where concrete is used in Alameda Creek or Calaveras Creek downstream of the replacement dam, a dry work area must be maintained at all times to prevent direct contact between curing concrete and the surface waters of adjacent streams. Water that inadvertently contacts uncured concrete must not be discharged into surface waters. All concrete shall be poured in the dry work area and shall be allowed to cure a minimum of 7 days before contact with water.
- Water drafting from surface waters in the action area is not permitted during construction without prior approval from NMFS. Water for dust abatement, if necessary, may come from the groundwater pumped from the stilling basin excavation area if that water meets the standards for turbidity or other potential pollutants set by the RWQCB; otherwise, water for dust abatement must be acquired from an off-site source. Other dust inhibitors used on access roads or elsewhere on the construction site must be non-toxic and approved for use in streamside applications.

#### *A.5.2 Standard Construction Measures and Noticing of Construction*

The SFPUC has established Standard Construction Measures to be included in all construction contracts.<sup>8</sup> The main objective of these measures is to reduce impacts on existing resources to the extent feasible. The Standard Construction Measures contain specific provisions for the protection of air and water quality; minimization of noise, traffic, and hazardous materials disruptions; as well as protocols for identifying and minimizing impacts on sensitive biological and cultural resources. The Standard Construction Measures also provide for early notification of businesses, owners, and residents in areas adjacent to the project regarding the nature, extent, and duration of construction activities. The SFPUC would ensure that the project's contract specifications contain uniform minimum provisions to address these issues.

In advance of project construction, the SFPUC would provide notice to EBRPD staff and park users describing project construction activities, schedule information, anticipated effects such as temporary closure of parking spaces or detours, and contact information. SFPUC would provide EBRPD staff with written notices at least 10 days prior to the start of construction, and coordinate with EBRPD staff to post clear signage for park users. In addition, information will be placed on the SFPUC website ([sfwater.org/sunolvalley](http://sfwater.org/sunolvalley)), and a 24-hour answering service number would be provided for park users to ask questions. The SFPUC would similarly notify the three property owners who live within the inholding areas of the park.

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<sup>8</sup> San Francisco Public Utilities Commission (SFPUC), 2007. Standard Measures to be Included in Construction Contracts and Project Implementation. February 7, 2007.

## A.6 Project Approvals

The project would require permits and authorizations from federal, State, and local agencies, which could rely in whole or in part on this IS/MND. The relevant agencies and permits or approvals could include the following:

### **Federal**

- U.S. Army Corps of Engineers: Clean Water Act (CWA) Section 404 Nationwide Permit
- U.S. Fish and Wildlife Service: Federal Endangered Species Act, Section 7, Biological Opinion (A separate Biological Opinion from the one mandating the proposed project activities.)

### **State**

- California Department of Fish and Wildlife: California Fish and Game Code, Section 1602 Streambed Alteration Agreement
- State Water Resources Control Board (SWRCB): National Pollutant Discharge Elimination System (NPDES) order 2009-0009-DWQ, General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)
- California Regional Water Quality Control Board, San Francisco Bay Region: Porter-Cologne Water Quality Control Act, Waste Discharge Requirements or new requirements; and CWA Section 401 Water Quality Certification; and
- California State Office of Historic Preservation: review for conformance with Section 106 of the National Historic Preservation Act

### **Local**

- SFPUC: adoption of California Environmental Quality Act (CEQA) findings, approval of the project, approval of construction contracts, and other implementation actions

## B. PROJECT SETTING

### B.1 Regional and Local Setting

The Little Yosemite Fish Passage Project is proposed for an area of unincorporated Alameda County, within the Sunol Regional Wilderness, on property owned by the City and County of San Francisco. This portion of the Alameda Creek watershed is managed by the San Francisco Public Utilities Commission and leased to the EBRPD. The project site is located off of Camp Ohlone Road, approximately 6.5 miles southeast of the intersection of Calaveras Road and Interstate 680 (I-680) and 3 miles southeast of the Sunol Valley Water Treatment Plant.

With 6,859 acres of open space and recreational lands, the Sunol Regional Wilderness offers hiking, horseback riding, picnicking, back-packing, camping, rock climbing, bird watching, and general nature viewing and wilderness exploration. The Ohlone Regional Wilderness area directly to the east comprises

approximately 9,737 acres of land with more than 42 miles of hiking and equestrian trails. The Ohlone Regional Wilderness has access from the Sunol Regional Wilderness via either Calaveras Road or the Ohlone Wilderness Trail. Combined, the Sunol Regional Wilderness and the Ohlone Regional Wilderness are commonly referred to as the Sunol-Ohlone Regional Wilderness area. This area includes a total of approximately 3,800 acres of SFPUC watershed lands in the Alameda Creek watershed that are leased to the EBRPD.

Typical land uses in the regional vicinity include private ranch lands, public open space, recreational facilities, rural commercial and residential development, and public water supply facilities. The specific fish passage improvements, referred to in this document as Features 9, 10, and 11, are proposed for locations within Alameda Creek, approximately 1 mile upstream of the Calaveras Dam and 2.6 miles downstream of the Alameda Creek Diversion Dam. This mostly-undeveloped reach of Alameda Creek is commonly referred to as Little Yosemite due to its adjoining steeply-sloping hillsides, rock outcrops, and small waterfalls.

### C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	<i>Applicable</i>	<i>Not Applicable</i>
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

No variances, special authorizations, or changes to the Planning Code or Zoning Map of San Francisco or any other jurisdictions are proposed as part of this project; therefore, these issues are not applicable and are not discussed further.

This section provides a general description of applicable land use plans and policies and how they apply to the project. Potential inconsistencies between the project and the applicable plans are also discussed. Whether a project is consistent with particular plans for which a consistency determination is required is decided at the time of project approval by the agency charged with that determination. Land use plans typically contain numerous policies emphasizing differing legislative goals, and an interpretation of consistency requires balancing all relevant policies. The board or commission that enacted a plan or policy determines the meaning of the policy and whether an individual project satisfies the policy at the time the board considers approval of the project.

The project site is in unincorporated Alameda County, within the Sunol Regional Wilderness area and the Alameda Creek Watershed. It is owned by the CCSF, managed by the SFPUC, and leased to the EBRPD. As it is an agency of the CCSF, the SFPUC is under the jurisdiction of the CCSF's charter and plans, where applicable. In addition, the SFPUC has adopted plans specific to the management of its water resources. As further discussed below, SFPUC is not legally bound by the planning and building laws of local jurisdictions for projects on CCSF-owned extraterritorial lands. However, non-CCSF land use plans are discussed in this section to the extent that they provide general land use planning information for the jurisdiction in which the project is located.

## C.1 City and County of San Francisco Plans and Policies

The CCSF land use plans and policies are primarily applicable to projects within the jurisdictional boundaries of the city of San Francisco, although in some cases they may apply to projects outside of these boundaries. These plans include the San Francisco General Plan, which sets forth the city's comprehensive, long-term land use policy; the San Francisco Accountable Planning Initiative, which serves as the basis for resolving inconsistencies in the San Francisco General Plan; and the San Francisco Sustainability Plan, which addresses the city's long-term sustainability.<sup>9</sup>

### C.1.1 Extraterritorial Lands

The CCSF has authority (San Francisco Charter, Section 4.112) over the management, use, and control of land it owns outside of the city, subject to the SFPUC's exclusive responsibility for the construction, management, use, and control of the city's water supplies and utilities (San Francisco Charter, Section 8B.121). Accordingly, the CCSF relies on its own plans and policies with respect to extraterritorial lands, as applicable. Although the San Francisco General Plan (General Plan) and San Francisco Sustainability Plan were developed for lands within the jurisdictional boundaries of San Francisco, their underlying goals apply to SFPUC projects on extraterritorial lands. In addition, the SFPUC Alameda Watershed Management Plan, described in Section C.2, applies specifically to CCSF-owned extraterritorial lands in Alameda County and Santa Clara County.

California Government Code Section 53090 et seq. provides SFPUC with intergovernmental immunity from the planning and building laws of other cities and counties. SFPUC, however, seeks to work cooperatively with local jurisdictions whenever CCSF-owned facilities are sited outside of San Francisco to avoid conflicts with local land use plans as well as building and zoning codes. SFPUC is required under Government Code Section 65402(b) to inform local governments of its plans to construct projects or

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<sup>9</sup> Sustainability or sustainable development can be defined as development that meets the needs of the present without compromising the ability of future generations to meet their needs.

acquire or dispose of extraterritorial property. Local governments have a 40-day review period to determine project consistency with their general plans. Under this requirement, the cities' or counties' determinations of consistency are advisory to SFPUC rather than binding.

### *C.1.2 San Francisco General Plan*

The San Francisco General Plan<sup>10</sup> sets forth the comprehensive long-term land use policy for the CCSF. The General Plan consists of 10 issue-oriented plan elements: air quality, arts, commerce and industry, community facilities, community safety, environmental protection, housing, recreation and open space, transportation, and urban design. Plan elements relevant to the project are briefly described below.

- **Air Quality Element**—Promotes clean air planning through objectives and policies that ensure compliance with air quality regulations.
- **Environmental Protection Element**—Addresses the impact of urbanization on the natural environment by promoting the protection of plant and animal life and freshwater sources and addressing the CCSF's responsibility to provide a permanent clean water supply to meet present and future needs as well as to maintain an adequate water distribution system.
- **Recreation and Open Space Element**—Composed of several sections, each dealing with a certain aspect of the CCSF's recreation and open space system: (1) the Regional Open Space System, (2) the Citywide Open Space System, (3) the shoreline, (4) the neighborhoods, and (5) downtown.

The project would address the impact of urbanization on the natural environment by improving upstream passage conditions for adult anadromous steelhead (*Oncorhynchus mykiss*) along the 0.4-mile long reach of Alameda Creek referred to as Little Yosemite. Thus, the project would promote the protection of animal life. As discussed in Section E.7, Air Quality, the project would comply with applicable air quality regulations. Therefore, the project would not obviously or substantially conflict with the Environmental Protection or Air Quality elements of the General Plan.

The Recreation and Open Space element policies address the development, preservation, and maintenance of open spaces; the preservation of sunlight in public open spaces; the elimination of non-recreational uses in parks and the reduction of automobile traffic in and around public open spaces; the maintenance and expansion of the urban forest; and the improvement of the western end of Golden Gate Park for public recreation. The proposed fish passage improvements would temporarily disrupt recreational activities in the Sunol Regional Wilderness near the site. However, the project would not include development of open spaces or introduce non-recreational uses in parks, and the existing open space in the project vicinity would be maintained and therefore the project would not conflict with the Recreation and Open Space element of the General Plan.

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<sup>10</sup> City and County of San Francisco (CCSF), 1988. San Francisco General Plan. As amended through 1996.

### *C.1.3 The Accountable Planning Initiative*

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the Planning Code to establish the following eight priority policies as a preamble to the San Francisco General Plan. The priority policies are the basis for resolving inconsistencies in the General Plan. Of the eight priority policies, only the eighth is relevant to the proposed project:

1. Neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses be enhanced
2. Housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of the neighborhoods
3. The city's supply of affordable housing be preserved and enhanced
4. Commuter traffic not impede MUNI transit service or overburden streets or neighborhood parking
5. A diverse economic base be maintained by protecting industrial and service sectors from displacement by commercial office development, and future opportunities for resident employment and ownership in these sectors be enhanced
6. The CCSF achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake
7. Landmarks and historic buildings be preserved
8. Parks and open spaces and their access to sunlight and vistas be protected from development

The project would not include any development and would not impede access to sunlight and vistas. Thus, there are no apparent inconsistencies between the project and these policies.

### *C.1.4 San Francisco Sustainability Plan*

The San Francisco Board of Supervisors endorsed the Sustainability Plan for the City of San Francisco<sup>11</sup> in 1997, although it has not committed the CCSF to perform the actions addressed in the plan. The plan serves as a blueprint for sustainability, with many of its individual proposals requiring further development and public comment. The plan's underlying goals are to maintain the physical resources and systems that support life in San Francisco and to create a social structure that will allow such maintenance. It is divided into 15 topic areas, some of which address specific environmental issues: air quality, biodiversity, energy, climate change and ozone depletion, food and agriculture, hazardous materials, human health, parks, open spaces and streetscapes, solid waste, transportation, and water and

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<sup>11</sup> City and County of San Francisco (CCSF), 1997. The Sustainability Plan for the City of San Francisco. Department of the Environment.

wastewater. Other topic areas are broader in scope and cover many issues: the economy and economic development, environmental justice, municipal expenditures, public information and education, and risk management. Each topic area has a set of indicators that is to be used over time to determine whether San Francisco is moving in a direction that supports sustainability for that area.

The project would not include long-term use of any energy resources or construction of any improvements that would contribute substantially to climate change or ozone depletion. Rather, the project would enhance passage for adult anadromous steelhead in Alameda Creek within the Sunol Regional Wilderness. Therefore, the project would not conflict with the goals of the plan.

## C.2 SFPUC Plans and Policies

The SFPUC has adopted various plans and policies that further direct its activities, including the Strategic Sustainability Plan, the Alameda Watershed Management Plan, and the Water Enterprise Environmental Stewardship Policy.

### *C.2.1 SFPUC Strategic Sustainability Plan*

The SFPUC's sustainability goals include providing customers with high quality, efficient and reliable water, power, and sewer services in a manner that is inclusive of environmental and community interests and also sustains the resources entrusted to the SFPUC's care. The 2011 Strategic Sustainability Plan<sup>12</sup> provides a framework for planning, managing, and evaluating SFPUC-wide performance in meeting this goal. It takes into account the long-term economic, environmental, and social impacts of the SFPUC's business activities. This plan consists of a Durable Section, which contains goals, objectives, and performance indicators to implement SFPUC's vision and values. The goals and objectives are then used to drive the plan's Dynamic Section, which contains specific actions, targets, measures, and budgeting. The SFPUC uses this document to evaluate its performance semiannually, to provide an annual score card, and to help it measure sustainability progress annually. The plan contains actions to develop land use guidance, incorporating the Environmental Stewardship Policy and other land management principles for San Francisco properties.

The project would not conflict with this plan because it would improve the environment by enhancing passage for adult anadromous steelhead in Alameda Creek within the Alameda Creek watershed.

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<sup>12</sup> San Francisco Public Utilities Commission (SFPUC), 2011. SFPUC Strategic Sustainability Plan, March.

### *C.2.2 Alameda Watershed Management Plan*

The Alameda Creek watershed encompasses 36,000 acres of CCSF-owned lands within the much larger hydrologic boundaries of the Alameda Creek watershed, including lands within the drainage areas of San Antonio and Calaveras Reservoirs as well as lands that drain to Alameda Creek in the Sunol Valley. The SFPUC adopted the Alameda Watershed Management Plan for the Alameda Creek watershed to provide a policy framework for the SFPUC to make decisions about activities that are appropriate on watershed lands.<sup>13</sup> The Alameda Watershed Management Plan provides goals, policies, and management actions that address watershed activities and reflect the unique qualities of the watershed. The Alameda Watershed Management Plan is also intended for use by the SFPUC as watershed management implementation guidelines. Alameda Creek watershed lands are managed by the SFPUC Natural Resources Division, Watershed Resource Management Section. The proposed project would be within the plan boundaries of the Alameda Watershed Management Plan.

As part of implementation of the Alameda Watershed Management Plan, the SFPUC reviews all plans, projects, and activities that occur within the Alameda Creek watershed for conformity with the management plan and for compliance with environmental codes and regulations. To accomplish this, the SFPUC has established a project review team with members from various SFPUC departments as well as the City Attorney's office. Appropriate SFPUC personnel review proposals for new facilities, structures, roads, trails, projects, and leases or for improvements to existing facilities. Projects subject to this review include those that involve construction, digging or earthmoving, clearing, installation, use of hazardous materials, or other disturbance to watershed resources. In addition, projects that involve the issuance of new or revised leases and permits are subject to this review procedure.

The SFPUC considers water quality protection to be the first and foremost goal of the Alameda Watershed Management Plan. The goals and policies are organized around the primary goal of water quality protection and secondary goals that pertain to the local water supply, natural resources, watershed protection, land use compatibility, fiscal management, and public awareness. The primary and secondary goals of the Alameda Watershed Management Plan are listed below.

- **Primary Goal:** Maintain and improve source water quality to protect public health and safety.
- **Secondary Goals:**
  - Maximize water supply.
  - Preserve and enhance the ecological and cultural resources of the watershed.
  - Protect the watersheds, adjacent urban areas, and the public from fire and other safety hazards.

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<sup>13</sup> San Francisco Public Utilities Commission (SFPUC), Final Alameda Watershed Management Plan. April 2001.



- Continue existing compatible uses and provide opportunities for potential compatible uses on watershed lands, including educational, recreational, and scientific uses.
- Provide a fiscal framework that balances financial resources, revenue-generating activities, and overall benefits and an administrative framework that allows implementation of the watershed management plans.
- Enhance public awareness of water quality, water supply, conservation, and watershed protection issues.

The Sunol Valley Resources Management Element is part of the Alameda Watershed Management Plan.<sup>14</sup> The goals and subgoals contained in the Sunol Valley Resources Management Element are incorporated into the goals and management actions set forth in the Alameda Watershed Management Plan. The Sunol Valley Resources Management Element addresses the integrated management of water resources, gravel mining resources, SFPUC facilities, cultural resources, agricultural resources, economic resources, park facilities, recreational resources, and fishery enhancement within the SFPUC Alameda Creek watershed lands.

The project would not conflict with the secondary goals of the Alameda Watershed Management Plan because it would preserve ecological resources in the Alameda Creek watershed by providing for passage of adult anadromous steelhead in Alameda Creek. Project compliance with specific policies and management actions of the Alameda Watershed Management Plan is addressed in the impact analyses presented in Sections E.1 through E.17.

### *C.2.3 Water Enterprise Environmental Stewardship Policy*

Adopted in June 2006, the Water Enterprise Environmental Stewardship Policy established the long-term management direction for CCSF-owned lands and natural resources affected by operation of the SFPUC regional water system within the Tuolumne River, Alameda Creek, and Peninsula watersheds.<sup>15</sup> It also addresses rights-of-way and properties in urban surroundings under SFPUC management. The policy includes the following:

- The SFPUC will proactively manage the watersheds under its responsibility in a manner that maintains the integrity of the natural resources, restores habitats for native species, and enhances ecosystem function.
- To the maximum extent practicable, the SFPUC will ensure that all operations of the SFPUC water system (including water diversion, storage, transport, and discharges of water); construction and maintenance of infrastructure; land management policies and practices; purchase and sale of watershed lands; and lease agreements for watershed lands protect and restore native species and the ecosystems that support them.

<sup>14</sup> San Francisco Public Utilities Commission (SFPUC), Sunol Valley Resources Management Element. November 1998.

<sup>15</sup> San Francisco Public Utilities Commission (SFPUC), SFPUC Final Water Enterprise Environmental Stewardship Policy. June 27, 2006.

- The SFPUC will operate the SFPUC water system in a manner that protects and restores native fish and wildlife downstream of SFPUC dams and water diversions, within SFPUC reservoirs, and on SFPUC watershed lands.
- The SFPUC will actively monitor the health of terrestrial and aquatic habitats, both under SFPUC ownership and affected by SFPUC operations, in order to continually improve ecosystem health.
- The SFPUC will manage rights-of-way and properties in urban surroundings under its management in a manner that protects and restores habitat value where available and encourages community participation in decisions that significantly interrupt or alter current land use in these parcels.

Key implementation strategies of the Environmental Stewardship Policy include: implementation and update of the Alameda Watershed Management Plan; development of a conservation plan for the Alameda Creek watershed; development of the Watershed and Environmental Improvement Program,<sup>16</sup> which includes the Alameda Creek watershed; and integration of the Environmental Stewardship Policy into the Water System Improvement Program and individual infrastructure projects that are part of the program.

The project would not conflict with the Water Enterprise Environmental Stewardship Policy because it would help restore native fish to Alameda Creek by enhancing passage of adult anadromous steelhead in the creek downstream of Calaveras Dam Replacement Project infrastructure that affects creek flows.

### C.3 Other Plans and Policies

#### *C.3.1 Alameda County Land Use Plans and Policies*

The project is located entirely on extraterritorial lands owned by the CCSF in unincorporated Alameda County. This section describes the local land use policies of Alameda County that are relevant to the proposed project. The SFPUC is not legally bound by the land use plans and policies of Alameda County (see Section C.1.1 for a discussion of intergovernmental immunity); however, these plans and policies are discussed to the extent that they provide pertinent planning information with respect to evaluating the project under CEQA.

The following factors affect the application of the Alameda County General Plan and East County Area Plan to the proposed project:

**Local Agency Project Approval.** The project would not require a local encroachment permit from Alameda County.

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<sup>16</sup> The purpose of the Watershed and Environmental Improvement Program is to identify, prioritize, protect, and restore lands and natural resources in the vicinity of the SFPUC's regional water system. The program includes ecosystem and habitat protection, improvement, and restoration projects.

**Building and Zoning Ordinances.** Building and zoning ordinances are the most specific expressions of general plan goals, objectives, and policies. State law and judicial interpretations of state law (California Government Code Section 53090 et seq.) mutually exempt cities and counties from complying with each other's building and zoning ordinances. The SFPUC, which is part of the CCSF, is therefore exempt from complying with the building and zoning ordinances of other cities and counties (California Government Code Section 53091). State law also exempts public utilities and special-purpose local agencies (such as water districts) from complying with local building and zoning ordinances when locating or constructing facilities for the production, generation, storage, treatment, or transmission of water. The proposed project does not include the construction of any facilities that would be subject to the building and zoning ordinances of Alameda County.

**Local Government Notification and Consistency Determination Requirements.** California Government Code Section 65402(b) requires that the SFPUC inform cities and counties of its plans to construct projects or acquire or dispose of extraterritorial property within their jurisdictions. The local governments then have 40 days to determine whether the project is consistent with their general plans, although these consistency determinations are advisory to the SFPUC rather than binding. Prior to implementation of the project, Alameda County would be notified pursuant to California Government Code Section 65402(b). Notwithstanding the above, where CCSF-owned projects are sited outside of San Francisco, the SFPUC seeks to work cooperatively with local jurisdictions to avoid conflicts with local land use plans and building and zoning codes.

The Alameda County General Plan governs land use planning and development in unincorporated Alameda County. Alameda County divides its general plan into area plans and functional elements. Area plans address area-specific issues (i.e., land use, open space, circulation, noise, seismic hazards, public facilities and services) that affect both unincorporated and incorporated areas, but these plans have legal regulatory effect only within currently unincorporated areas. Functional elements address broader issues on a countywide basis and provide a comprehensive and consistent policy framework for the more specific area plans.

The East County Area Plan governs land use planning for eastern Alameda County.<sup>17</sup> The East County planning area, which includes the project area, extends from the San Joaquin County line east to the city of Fremont boundary. The project area is within Alameda County's unincorporated rural area, outside of the urban growth boundary. The East County Area Plan designates land uses on SFPUC Alameda Creek watershed lands as Resource Management, Water Management, and Parklands. The project area is designated as Water Management land. The Water Management designation permits watershed management, gravel quarries, agricultural uses, recreational uses, and habitat protection. Generally, this land use designation and pertinent policies of the East County Area Plan that cover this part of the county discourage intensive development; discourage encroachment of urban uses and access roads; encourage preservation of cultural resources; and encourage protection of open space, agricultural land, visual features, and natural resources, specifically on SFPUC watershed lands. The East County Area

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<sup>17</sup> Alameda County, East County Area Plan, A Portion of the Alameda County General Plan, Volume I: Goals, Policies, and Programs. May 2002.

Plan supports interjurisdictional coordination among various landowners to carry out resource preservation and protection goals.

Overall, the East County Area Plan seeks to protect environmental and human health and safety by incorporating measures to minimize exposure to excessive noise levels and air pollutants, and by designing and constructing critical facilities to reduce seismic hazards and service disruption. It is also the intent of the East County Area Plan to discourage land use activities that adversely affect the watershed protection objectives and purposes of the SFPUC.

The proposed project would not conflict with the East County Area Plan because it supports watershed protection objectives in the Alameda Creek watershed by enhancing passage of adult anadromous steelhead in Alameda Creek.

### *C.3.2 East Bay Regional Park District Master Plan*

EBRPD manages the regional park system for Alameda and Contra Costa counties. The EBRPD Master Plan (Master Plan) includes policies that guide the stewardship and development of current and future regional parks, including trails and related services, with particular emphasis on resource conservation (both natural and cultural resources), management, interpretation, public access, and recreation. The policies relevant to the proposed project pertain to natural and cultural resource management and protection, public access, and recreation.

The project site is located on CCSF-owned lands managed by SFPUC and leased to EBRPD. The proposed improvements would enhance passage of adult anadromous steelhead in Alameda Creek and implementation of the proposed project would not conflict with the policies and guidelines contained in the Master Plan.

## **D. SUMMARY OF ENVIRONMENTAL EFFECTS**

The project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Land Use                                  | <input type="checkbox"/> Air Quality                   | <input checked="" type="checkbox"/> Biological Resources               |
| <input type="checkbox"/> Aesthetics                                | <input type="checkbox"/> Greenhouse Gas Emissions      | <input checked="" type="checkbox"/> Geology and Soils                  |
| <input type="checkbox"/> Population and Housing                    | <input type="checkbox"/> Wind and Shadow               | <input type="checkbox"/> Hydrology and Water Quality                   |
| <input checked="" type="checkbox"/> Cultural and Paleo. Resources  | <input type="checkbox"/> Recreation                    | <input type="checkbox"/> Hazards/Hazardous Materials                   |
| <input checked="" type="checkbox"/> Transportation and Circulation | <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Mineral/Energy Resources                      |
| <input type="checkbox"/> Noise                                     | <input type="checkbox"/> Public Services               | <input type="checkbox"/> Agricultural and Forest Resources             |
|  |  | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

## E. EVALUATION OF ENVIRONMENTAL EFFECTS

This Initial Study (IS) examines the project to identify potential effects on the environment. For each item on the IS checklist, the evaluation has considered the impacts of the project both individually and cumulatively (i.e., combined with other past, present, and reasonably foreseeable future projects). All items on the IS checklist that have been checked “Less than Significant with Mitigation Incorporated,” “Less-than-Significant Impact,” “No Impact,” or “Not Applicable” indicate that, upon evaluation, staff has determined that the project would not have a significant adverse environmental impact related to that issue. A full discussion is included for all items checked “Less than Significant with Mitigation Incorporated” and “Less-than-Significant Impact,” and a brief discussion is included for items checked “No Impact” or “Not Applicable.” The items checked above have been determined to be “Less than Significant with Mitigation Incorporated.” A determination of “Potentially Significant” applies where a project component could result in a significant impact for which mitigation would not be expected to reduce the impact to a less-than-significant level. Implementation of the proposed project would not be expected to cause any “Potentially Significant” impacts.

### Numbering of Impacts and Mitigation Measures

Environmental impacts are numbered throughout this IS using the section topic identifier followed by sequentially numbered impacts; for example, Impact CP-2 is the second impact statement in the “Cultural and Paleontological Resources” section. Mitigation measures are numbered to correspond to the impact numbers; for example, Mitigation Measure M-CP-2 addresses Impact CP-2. Cumulative impacts are discussed at the end of each environmental topic impact discussion and are identified by the letter C; for example, Impact C-CP addresses cumulative cultural and paleontological resources impacts.

### Approach to Cumulative Impact Analysis

California Environmental Quality Act (CEQA) Guidelines Section 15130(b)(1) indicates that a cumulative impact analysis should be based on either (1) a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a project, or (2) a summary of projections contained in a general plan or related planning document. This document uses the list-based approach. The following factors were used to determine an appropriate list of individual projects to be considered in this cumulative analysis:

- **Similar Environmental Impacts**—A relevant project contributes to effects on resources that are also affected by the project. A relevant future project is defined as one that is “reasonably foreseeable,” such as a proposed project for which an application has been filed with the approving agency or has approved funding.
- **Geographic Scope and Location**—A relevant project is one within the geographic area where effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects on air quality consists of the affected air basin.

- **Timing and Duration of Implementation**—Effects associated with activities for a relevant project (e.g., short-term construction or long-term operations) would likely coincide with the related effects of the project.

**Table 3** lists the plans and projects in the project vicinity considered in the cumulative impact analysis, based on the above-referenced factors. Cumulative projects that could have construction schedules that overlap with the construction of the project are listed in **bold**. Projects that have been completed are shaded in gray. The locations of these projects are depicted in **Figure 6**. The discussion of potential cumulative impacts is included in the individual environmental issue area subsections.

**TABLE 3  
PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS**

Project No.	Project Name (Jurisdiction)	Project Description	Estimated Construction Schedule
<i>SFPUC Projects</i>			
1	Calaveras Dam Replacement (SFPUC)	The project provides for the planning, design, and construction of a replacement dam at Calaveras Reservoir to meet seismic safety requirements. The new dam will restore the reservoir’s storage capacity to its original level (96,850 acre-feet) and has been designed to accommodate a potential enlargement of the dam in the future. The project also includes a number of habitat and fishery management actions. <sup>a</sup>	2011 to 2018
2	Camp Ohlone Road Dust Control Project (SFPUC)	The segment of Camp Ohlone Road between Geary Road Bridge and the Alameda Creek Diversion Dam will be capped with gravel to reduce fugitive dust emissions. Approximately 3.7 miles of Camp Ohlone Road will be covered in 6-8 inches of gravel. The gravel will be imported by truck from offsite locations. All capping work would be completed prior to commencement of the Little Yosemite Fish Passage Project construction. (Y. Zhang, personal communication, September 26, 2014)	2015-2016
3	Alameda Creek Diversion Dam Fish Passage Project (SFPUC)	On Alameda Creek, approximately 2.6 miles upstream of the Little Yosemite project area. Construct fish ladder around and make related improvements to Alameda Creek Diversion Dam (ACDD), operational changes to provide upstream access for steelhead. Once constructed, the project will control flows within Alameda Creek within the range suitable for fish passage. <sup>b</sup>	2016 to 2017
4	Geary Road Bridge Replacement (SFPUC)	This project replaced the existing timber bridge at the end of Geary Road with a new steel bridge that crosses Alameda Creek in the Sunol Regional Wilderness on lands owned by the CCSF and operated by the East Bay Regional Park District (EBRPD). The bridge provides access for pedestrians as well as vehicular traffic for resident ranchers, Camp Ohlone, EBRPD staff, SFPUC staff, the fire department, and other authorized vehicles. Construction of the bridge eliminated the need for trucks and other vehicles to drive through Alameda Creek at a low water crossing. <sup>c</sup>	Completed in 2014
5	The Alameda Creek Recapture Project (SFPUC)	The Alameda Creek Recapture project would transfer water that naturally infiltrates into the existing quarry Pond F2 to SFPUC facilities in the Sunol Valley using a new pumping system which includes a new pump station called the Alameda Creek Recapture Pump Station (ACRPS).	2017 to 2018
6	Sunol Long-Term Improvement Project (SFPUC)	<b>The Sunol Long Term Improvement Project includes improvements to SFPUC’s Sunol Corporation Yard and development of the new Alameda Creek Watershed Center in the vicinity of the Sunol Water Temple.<sup>d</sup></b>	2015 to 2017

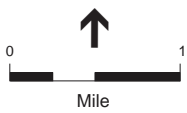
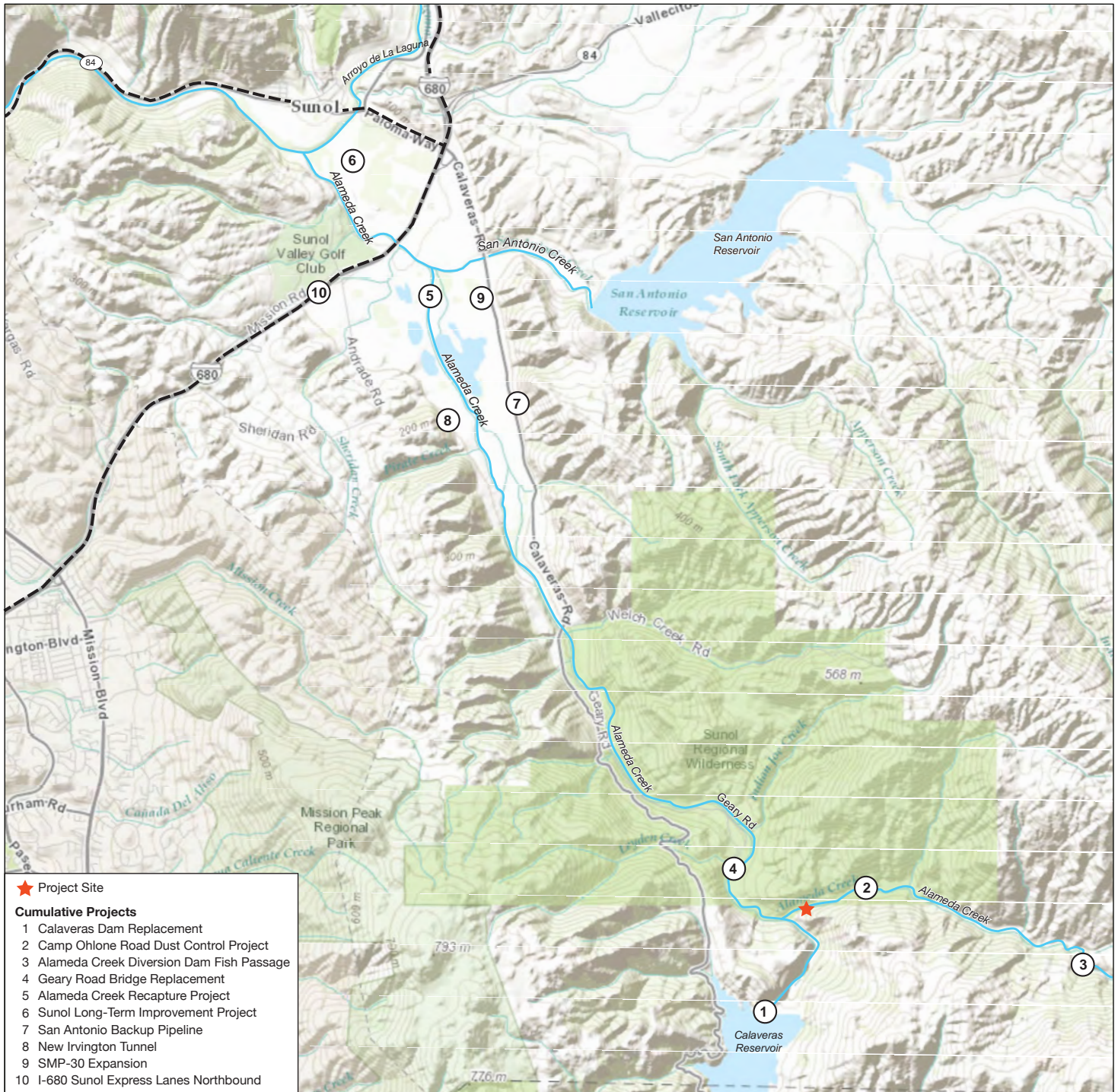
**TABLE 3 (Continued)**  
**PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS**

<b>Project No.</b>	<b>Project Name (Jurisdiction)</b>	<b>Project Description</b>	<b>Estimated Construction Schedule</b>
<i>SFPUC Projects (cont.)</i>			
7	San Antonio Backup Pipeline (SFPUC)	The San Antonio Backup Pipeline (SABPL) project includes construction of several new facilities and improvements to provide reliable conveyance capacity for planned and emergency discharges of Hetch Hetchy water out of the SFPUC regional water system under future flow conditions. The SABPL project would also increase operational flexibility and delivery reliability during emergencies and planned maintenance activities. <sup>e,f</sup>	2012 to 2015
8	New Irvington Tunnel (SFPUC)	The New Irvington Tunnel (NIT) project involves constructing a new tunnel parallel to and just south of the existing Irvington Tunnel to convey water from the Hetch Hetchy system and the Sunol Valley Water Treatment Plant (SVWTP) to the Bay Area. <sup>g,h</sup>	2010 to 2015
<i>Non-SFPUC Projects</i>			
9	SMP-30 Quarry Expansion and Cutoff Wall (Oliver De Silva, Inc.)	This project proposes to expand the active mining area permitted under SMP-30 by 58 acres, for a total of 381 acres, and to extend the maximum depth of excavation from 140 feet to at least 225 feet below ground surface. Mining could potentially occur to a depth of 400 feet below ground surface. The project includes several plant improvements such as an asphalt batch plant and a concrete plant. In addition, the quarry operator would install an approximately 7,800-foot-long, 35- to 45-foot-deep cutoff wall along the west bank of Alameda Creek and a 2,300 foot long wall along the south bank of San Antonio Creek to reduce the seepage of water from these creeks into active mining areas. The quarry operator would also restore the same banks of Alameda and San Antonio Creeks by planting native vegetation. This project is contingent upon permit approvals from Alameda County for the expanded mining area. <sup>i</sup>	The construction schedule for the SMP-30 cutoff wall is unknown.  Active mining would be extended for 30 years after approval of the new permit.
10	I-680 Sunol Express Lanes – Northbound (Alameda County Transportation Commission)	This project includes the construction of an HOV/express lane on northbound I-680 between the State Route 237 interchange in Santa Clara County and the State Route 84 interchange. Project and environmental approval of the project is expected by the summer of 2015 and the construction schedule has not been determined at this point. <sup>j</sup>	Unknown

SOURCES:

- <sup>a</sup> San Francisco Planning Department, 2011. Final Environmental Impact Report for the San Francisco Public Utilities Commission Calaveras Dam Replacement Project, San Francisco Planning Department File No. 2005.0161E, State Clearinghouse No. 2005102102. Certified January 27, 2011a.
- <sup>b</sup> San Francisco Public Utilities Commission (SFPUC), 2014. CER Checklist for Environmental Review, Fish Passage Facilities within the Alameda Creek Watershed (ACDD).
- <sup>c</sup> San Francisco Planning Department, 2012. Final Mitigated Negative Declaration, Geary Road Replacement Project, San Francisco Planning Department File No. 2008.0386E, June 13, 2012, amended on September 6.
- <sup>d</sup> San Francisco Planning Department, 2014. Notification of Project Receiving Environmental Review, Sunol Long Term Improvements Project. March 20.
- <sup>e</sup> San Francisco Planning Department, 2012. Final Mitigated Negative Declaration, Geary Road Replacement Project, San Francisco Planning Department File No. 2008.0386E, June 13, 2012, amended on September 6.
- <sup>f</sup> San Francisco Public Utilities Commission (SFPUC), 2014. San Antonio Backup Pipeline (WSIP) Project Update. Available online at [http://216.119.104.145/bids/projectDetail.aspx?prj\\_id=245](http://216.119.104.145/bids/projectDetail.aspx?prj_id=245). Accessed May 7, 2014.
- <sup>g</sup> San Francisco Planning Department, 2009. Final Environmental Impact Report for the San Francisco Public Utilities Commission New Irvington Tunnel Project, San Francisco Planning Department File No. 2005.0162E, State Clearinghouse No. 2006092085. November 5.
- <sup>h</sup> San Francisco Public Utilities Commission (SFPUC), 2014. New Irvington Tunnel (WSIP) Project Update. Available online at [http://216.119.104.145/bids/projectDetail.aspx?prj\\_id=138](http://216.119.104.145/bids/projectDetail.aspx?prj_id=138). Accessed May 7, 2014.
- <sup>i</sup> County of Alameda Planning Department, 2012. SMP-30 Revised Use Permit, Sunol Valley Aggregate Quarry Project, Draft Environmental Impact Report, SCH No. 2011102051. April.
- <sup>j</sup> Alameda County Transportation Commission, Capital Projects Program, Project Fact Sheet, I-680 Sunol Express Lanes - Northbound. March.





SOURCE: ESA+Orion, 2014; ESRI

Little Yosemite Fish Passage Project . 120468.04

**Figure 6**  
Cumulative Projects



## E.1 Land Use and Land Use Planning

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>1. LAND USE AND LAND USE PLANNING— Would the project:</b>					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial impact upon the existing character of the vicinity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project would include construction of in-stream improvements in Alameda Creek to improve fish passage in the creek. The project would be constructed on undeveloped SFPUC land in the Sunol Regional Wilderness that is not an established community; therefore, no new facilities or structures would be constructed that could physically divide an established community and Topic 1(a) is not applicable.

**Impact LU-1: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)**

Land use impacts are considered significant if the project would conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Environmental plans are those that directly address environmental issues and/or contain targets or standards that must be met in order to preserve or improve characteristics of the physical environment.

As described in Section C, Compatibility with Existing Zoning and Plans, the project would not obviously or substantially conflict with applicable plans, policies, and regulations. Further, the project would comply with all applicable regulations as listed in Section A.6, Project Approvals. Therefore, impacts related to conflict with applicable land use plans, policies, and regulations would be less than significant.

**Impact LU-2: The project would not have a substantial impact upon the existing character of the vicinity. (No Impact)**

Impacts on existing land use character in the project vicinity could result if the project were to result in a long-term change in land use that would be incompatible or conflict with established land uses. The analysis of the project's effects on existing land use character includes consideration of the character of the proposed project relative to the existing land use context. An adverse effect could occur if a new use

were placed next to an incompatible existing use, such that the basic function of either the existing use or the new use would be substantially impaired. For example, if a residential use were located next to a factory with toxic air emissions, either or both uses would be unable to function as intended.

The project site is in Alameda County, on Alameda Creek watershed lands owned by the City and County of San Francisco (CCSF) and managed by the SFPUC. As described in Section C, Compatibility with Existing Zoning and Plans, Alameda County's East County Area Plan designates the project site as suitable for Water Management uses. The Water Management designation permits watershed management, gravel quarries, agricultural uses, recreational uses, and habitat protection. The Alameda Creek watershed lands in the project vicinity are largely undeveloped and consist primarily of rolling grassland, scattered oak woodlands, and narrow riparian corridors. Nearby land uses include regional open space and recreational uses of the Sunol Regional Wilderness. The nearest residential use is the EBRPD ranger's residence, located approximately ½ mile north of Staging Area 1 near Geary Road. There are no commercial areas in proximity to the project site.

No new land uses would be introduced as a result of the project. Similarly, the proposed improvements would not disrupt existing nearby land uses or preclude use of those lands for Water Management activities. Therefore, there would be no impact related to effects on the existing character of the vicinity once the project is constructed.

**Impact C-LU: The project, in combination with past, present, and reasonably foreseeable future projects, would not result in cumulative impacts related to conflicts with applicable land use plans, policies, or regulations. (Less than Significant)**

The geographic scope for potential cumulative land use impacts encompasses the Sunol Regional Wilderness and Alameda Creek watershed, and particularly land uses along Camp Ohlone Road which generally include open space and recreational uses.

As discussed in Impact LU-1 and Section C, Compatibility with Existing Zoning and Plans, construction of the project would have a less-than-significant effect regarding conflicts with applicable land use plans, policies, and regulations. Similarly, the identified cumulative projects would also be required to comply with applicable land use plans, policies, and regulations adopted for the purpose of minimizing an environmental effect. Therefore, cumulative impacts related to compatibility with applicable land use plans, policies, or regulations would be less than significant.

As discussed in Impact LU-2, the proposed project would not introduce new land uses and would not disrupt existing nearby land uses or preclude use of those lands for Water Management activities. Similarly, cumulative Projects 2 and 3, Camp Ohlone Road Dust Control Project and Alameda Creek

Diversion Dam (ACDD) Fish Passage Project, respectively, would not introduce new land uses and would not disrupt existing nearby land uses or preclude use of those lands for Water Management activities. Therefore, there would be no impact cumulative impacts related to effects on the existing character of the vicinity.

## E.2 Aesthetics

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>2. AESTHETICS— Would the project:</b>					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The study area for the aesthetic resources impact analysis includes the proposed staging areas along Camp Ohlone Road and locations within and adjacent to Alameda Creek that would be physically altered by implementation of the proposed fish passage improvements. As described in Section 2, Project Description, the specific locations within Alameda Creek where the fish passage improvements would be constructed are referred to as “Features 9, 10, and 11.” An overview of the study area and the locations of specific project elements are presented in Figure 2 and Figure 3. Photographs of the existing conditions at project staging areas are shown in **Figure 7**. Photographs of the existing conditions of Features 9, 10, and 11 are presented in **Figures 8 through 14**. Figures 8 through 14 also depict project components, which are discussed further in Impact AE-1.

**Impact AE-1: The project would not have an adverse effect on a scenic vista, scenic resources, or the existing visual character or quality of the site and its surroundings. (Less than Significant)**

### Designated Scenic Resources

There are no state designated scenic highways in the study area. Interstate 680 (I-680), located approximately 5.5 miles to the northwest, is the nearest state-designated scenic highway. The Scenic Route Element of the Alameda County General Plan designates both Calaveras Road and Geary Road as County



1. View of Staging Area 1, looking south from Geary Road Bridge.



2. View of Staging Area 2, looking southeast (towards Alameda Creek) from Camp Ohlone Road.



3. View of Staging Area 3 (right side of photo), looking south along Camp Ohlone Road.

SOURCE: ESA

Little Yosemite Fish Passage Project . 120468.04

**Figure 7**  
Representative Photos of Staging Areas









1a - Existing view of Feature 9 Step Weir site, looking upstream.



1b - Rendering of Feature 9 Step Weir, looking upstream.

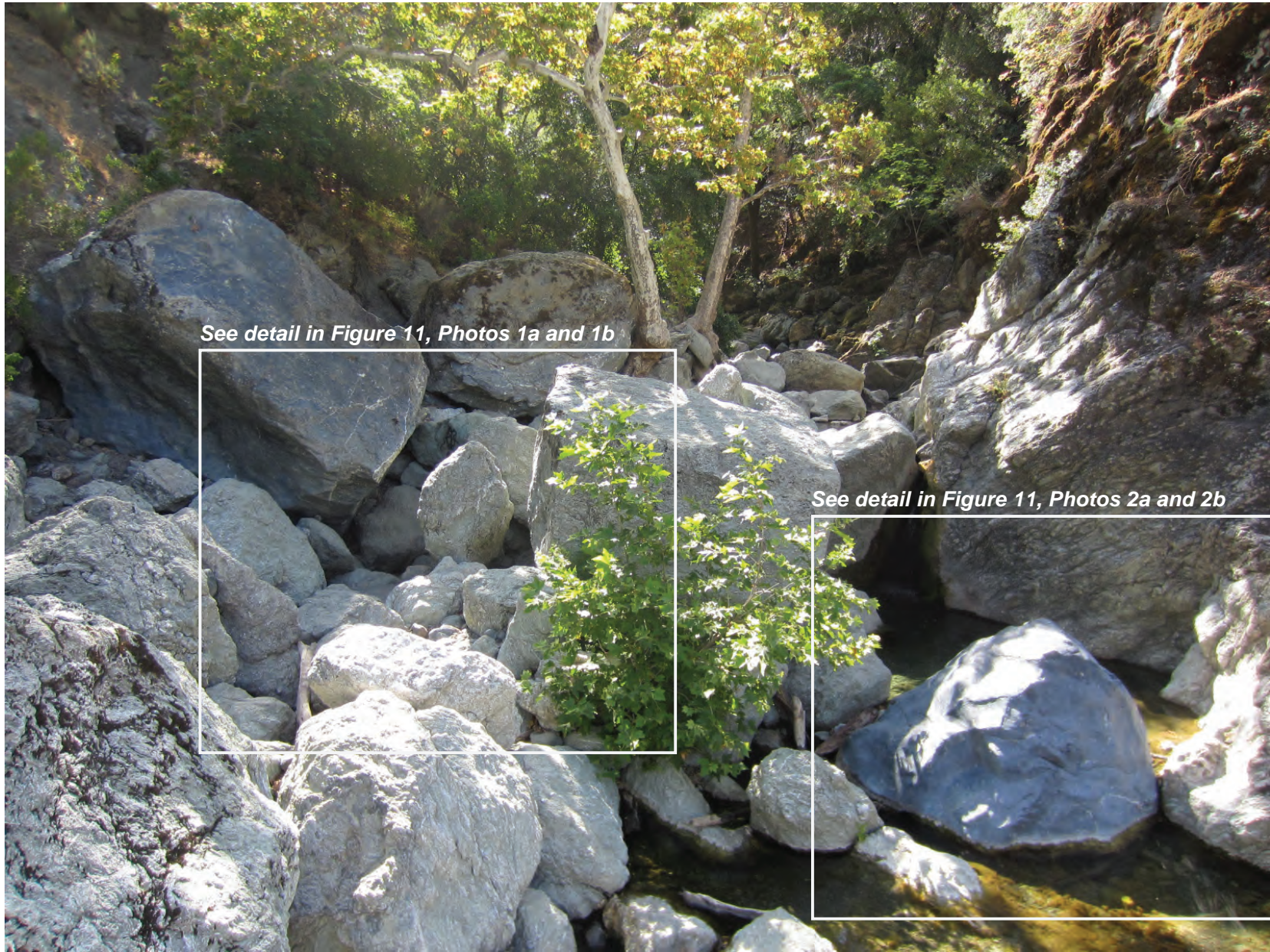


2a - Existing view of Feature 9 Tailwater Weir, looking downstream.



2b - Rendering of Feature 9 Tailwater Weir, looking downstream.

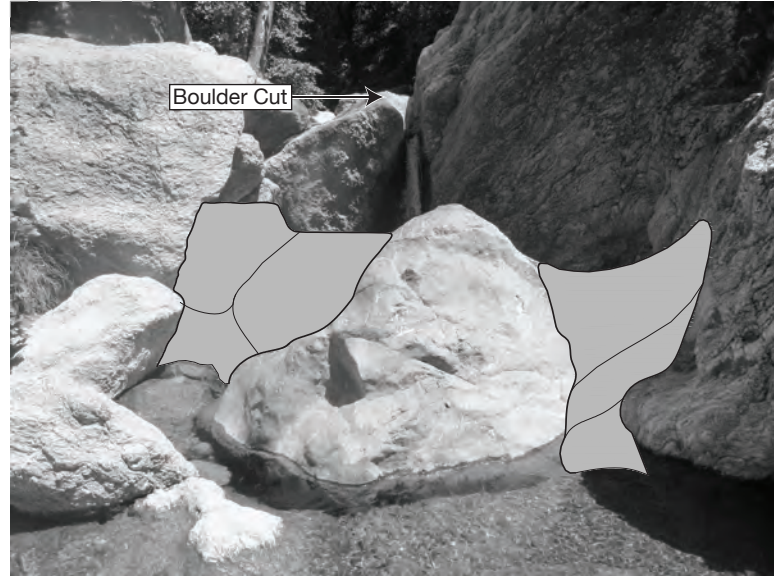








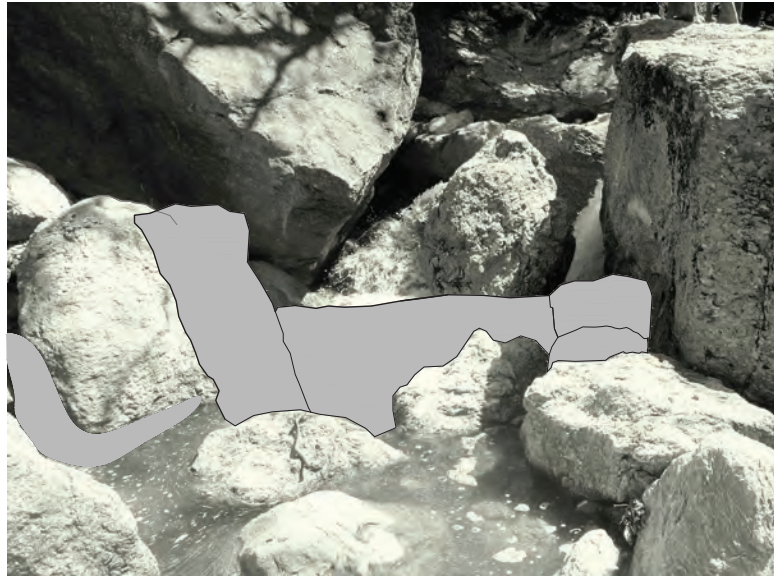
1a. Existing view of Feature 10 Boulder Cut and Step Weir A site, looking upstream.



1b - Rendering of Feature 10 Boulder Cut and Step Weir A, looking upstream.



2a. Existing view of Feature 10 Step Weir B site, looking upstream.



2b - Rendering of Feature 10 Step Weir B, looking upstream.

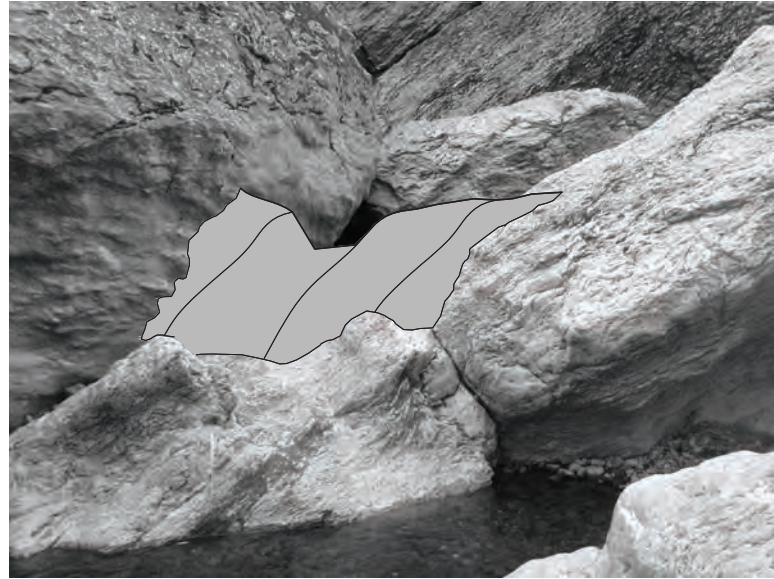








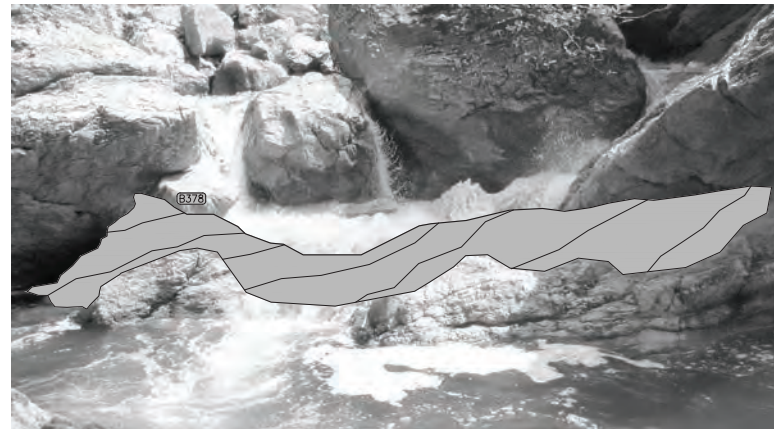
1a - Existing view of Feature 11 Step Weir site, looking upstream.



1b - Rendering of Feature 11 Step Weir, looking upstream.

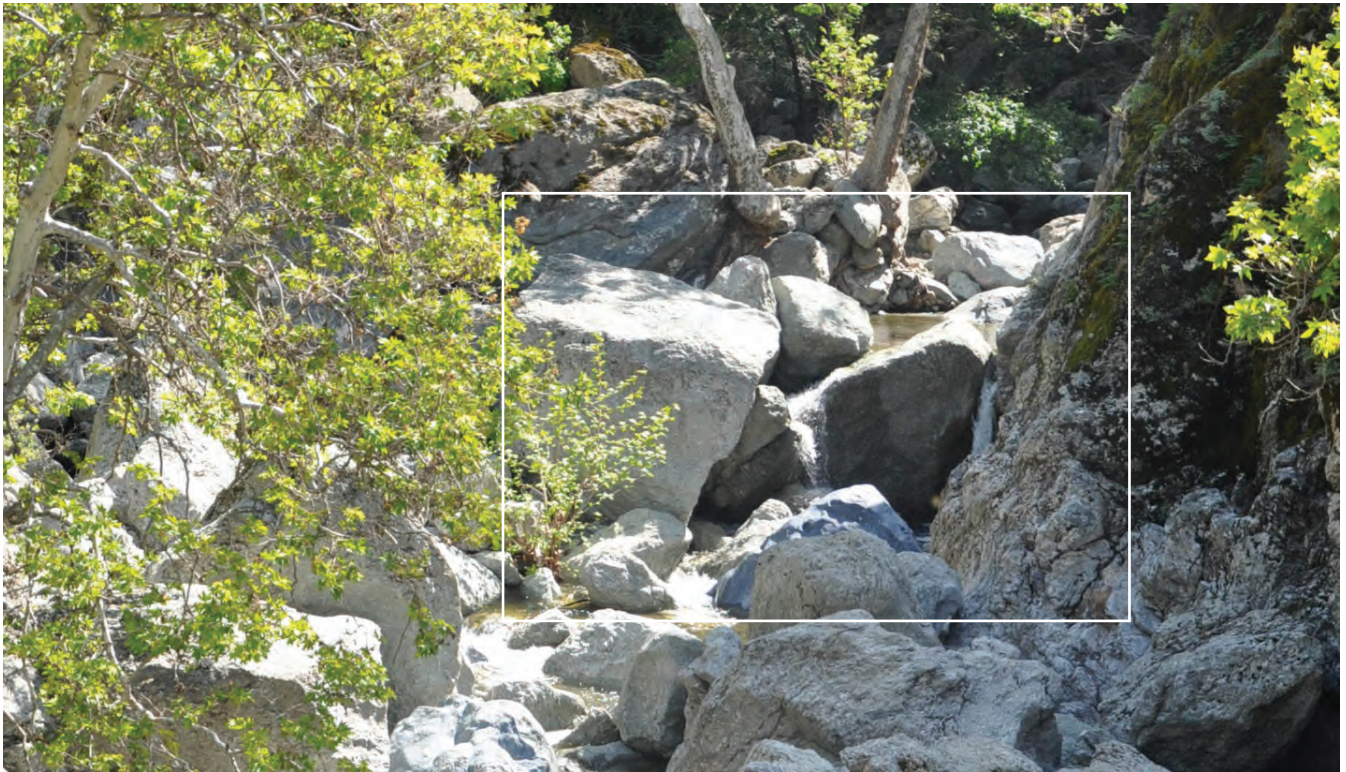


2a - Existing view of Feature 11 Tailwater Weir site, looking upstream.



2b - Rendering of Feature 11 Tailwater Weir, looking upstream.





1. Existing View of Feature 10 Boulder Cut and Step Weir A site, looking upstream.



2. Existing View of Feature 10 Boulder Cut and Step Weir A site, looking upstream.

SOURCE: ESA

Little Yosemite Fish Passage Project . 120468.04

**Figure 14**  
Existing View and Simulation of Feature 10 Improvements Site



scenic roads.<sup>18</sup> The study area is near but not within direct view of these roads. The Alameda Watershed Management Plan guides the management of SFPUC lands in the Alameda Creek watershed. The Management Plan acknowledges that the watershed contains scenic resources and that new construction activities in the watershed have the potential to affect these resources. However, scenic resources identified in the Management Plan mainly include those with existing State or local designation, such as State- or county-designated scenic routes (e.g., Geary Road). The Management Plan, as well as the EBRPD District Master Plan do not identify or designate any scenic resources that would be affected by the proposed project.

### Visual Character and Quality of the Project Site and Surroundings

The project is proposed for lands within the Sunol Regional Wilderness area and the 130,000-acre Upper Alameda Creek sub-watershed, in an area managed by SFPUC and leased to EBRPD. In this portion of the park, the dominant features of the landscape are large, gently rolling hills. In the upland areas, south-facing slopes are dominated by tall grasses and dotted with individual or small clusters of oak trees and rocky outcrops, which add roughness to hillsides that are otherwise smooth in appearance. North-facing slopes host denser stands of shrubs and trees and contrast both in color and texture with their south-facing counterparts. Drainages, which have formed depressions in the hillsides, are accentuated by dense riparian vegetation.

The Alameda Creek corridor is framed by steeply sloping hillsides which give way to a densely vegetated riparian corridor along the creek channel. The Little Yosemite area is unique among the surrounding landscape features. This reach of Alameda Creek is confined by exposed bedrock to a deep and narrow channel containing boulders ranging in size from a few inches to tens of feet. This boulder assemblage disrupts creek flows, causing the formation of small waterfalls and clear tailwater pools. In some areas, the riparian vegetation forms a canopy, shading the creek channel. In other areas, giant boulder outcroppings offer views of distant hillsides beyond what EBRPD refers to as Little Yosemite's scenic gorge-like setting.<sup>19</sup>

Few roads, utilities, or facilities exist in the Sunol Regional Wilderness. Existing development near the study areas includes the park entrance (e.g., the visitor's center), and the Leyden Flats and Alameda Grove picnic areas. Within the study area, development is generally limited to Camp Ohlone Road, McCorkle trailhead near Staging Area 1, and the Cerro Este Road and Canyon View Trail in the Little

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<sup>18</sup> Alameda County. 1994. *Scenic Route Element of the General Plan*. Alameda County, CA. Amended May 5, 1994.

<sup>19</sup> East Bay Regional Park District (EBRPD), Sunol Regional Wilderness, East Bay Regional Park District Website. Available online at: <http://www.ebparks.org/parks/sunol>. Accessed on June 19, 2014.

Yosemite area (trail markers are located just north of Staging Area 3). A picnic table and outhouse are situated at the intersection of Camp Ohlone Road and Cerro Este Road.

The study area does not offer notable views to and is not the primary focus of any designated scenic vista. However, the area's remoteness, undeveloped hillsides, prominent rocky outcrops, and vast meadows; along with Little Yosemite area's densely vegetated riparian corridor, exposed bedrock and massive boulders, and the associated waterfalls and pools, are scenic resources that beneficially contribute to the study area's visual quality. These are defining features of the study area's visual character.

#### Short-term Effects on Scenic Vistas, Scenic Resources, or the Existing Visual Character or Quality

Project construction would last approximately 4 months and involve construction equipment staging within areas adjacent to Camp Ohlone Road, minor grading to accommodate footings for the temporary wood ramp/stair system and work platform, dewatering, hand excavation, and concrete weir installation activities. Equipment staging would impact vegetated areas adjacent to Camp Ohlone Road. While no tree removal is proposed, tree trimming may be required to provide adequate access to the work areas at Features 9, 10, and 11. Construction equipment and access improvements within and adjacent to Camp Ohlone Road and Alameda Creek would contrast with the study area's overall undeveloped character.

As shown in Figure 7, equipment staging would be located along Camp Ohlone Road. Staging Area 1 would be located adjacent to a heavily traveled trail, but not in the vicinity of a key recreational destination. Therefore, only brief views of the staging area would be expected as trail users move along the trail and past the staging area. Staging Areas 2 and 3 would be located near a primary Alameda Creek access footpath (Staging Area 2) and creek overlook and informal creek-access path opposite the picnic table and outhouse (Staging Area 3); therefore, views of these staging areas may be prominent for longer periods of time by trail users than at Staging Area 1. Staging Areas 2 and 3 are largely devoid of groundcover and so use of this area for staging would not be expected to result in trampling or destruction of existing vegetation that results in new long-term visual impact. Project activities at Staging Area 3 may preclude use of that area as a creek overlook.

Within the Little Yosemite area, views of Alameda Creek from Camp Ohlone Road are mostly obstructed by intervening topography and dense vegetation. Views of Alameda Creek are clearer along the above-noted footpaths connecting Camp Ohlone Road and Alameda Creek, and from vantage points within the creek corridor. However, public access to these footpaths and within the Little Yosemite area reach of Alameda Creek would be restricted during construction activities. Project construction areas would not be overtly apparent from the nearest public viewpoints. However, they may still be visible from discrete locations along Camp Ohlone Road (e.g., in the immediate vicinities of the Staging Areas 2 and 3).

Project implementation would increase the amount of construction activity within the study area, remove vegetation adjacent to a heavily traveled trail and within a scenic recreational destination, and preclude access for a period of up to 8 days. These activities would temporarily diminish the scenic quality and character at specific locations and from limited vantage points within study area. However, the impacts would be temporary, isolated, and would not detract from the overall scenic quality or character of the study area or the broader Sunol Regional Wilderness. As noted in Section A, Project Description, most areas disturbed during construction would be restored to the approximate pre-construction condition. Any necessary tree trimming would occur within densely vegetated areas, be limited to the immediate work areas, and would not change the quality or otherwise affect resources substantially in the context of vegetation/trees in the area. Therefore, project construction would have a less-than-significant impact on aesthetic resources. No mitigation is required.

#### Long-term Effects on Scenic Vistas, Scenic Resources, or the Existing Visual Character or Quality

The study area does not offer notable views to and is not the primary focus of any designated scenic vista. However, as noted previously, the park's undeveloped hillsides, rocky outcrops, and vast meadows, along with Little Yosemite's densely vegetated riparian corridor, exposed bedrock and massive boulders, and the associated waterfalls and pools, are scenic resources that beneficially contribute to the study area's visual quality. These are defining features of the study area's visual character. While the project would occur amidst such resources, most areas disturbed during construction would be restored to their approximate pre-construction condition. Impacts associated with construction staging, construction equipment access, and construction work areas would be temporary and have no long-term effect on scenic resources or visual quality of the study area. As such, the major contributors to the area's aesthetic appeal – the dense riparian vegetation, giant boulder assemblages, and cascading waterfalls and clear pools – would remain largely unaffected by the proposed project.

Project implementation, namely the installation of new concrete weirs, cutting of rock boulders, and plugging of a large hole between boulders would permanently alter the appearances of the boulder assemblages, waterfalls, and pools within Alameda Creek, each of which is a contributing element of the Little Yosemite area's scenic character and visual quality. As shown in Figures 8 through 14, the project would introduce new non-natural elements into an otherwise natural creek channel. Figures 9, 11, and 13 depict the general shapes, sizes, and locations of the proposed project components. As discussed in Section A, Project Description, the weirs would be shaped, colored, and textured to be compatible with the adjacent natural boulders. A representative simulation of the proposed Feature 10 boulder cut and step weir A is presented in Figure 14. Due to intervening topography and vegetation, these changes would not be obvious to passersby on the Camp Ohlone Trail.

Project-related impacts on scenic resources and visual quality would be visible mainly from vantage points within or immediately adjacent to the creek channel, downstream of the project sites looking upstream. While swimming is expressly prohibited within this portion of Alameda Creek, some visitors still climb down into the creek corridor and among the boulders within the creek channel. The informal access pathways are steep and difficult for the less-physically-inclined. Access to the site of Feature 9 is particularly challenging. However, existing informal pathways lead to popular recreational destinations in the immediate vicinities of Features 10 and 11. As a result, such visual changes would likely be most apparent from visitor destinations in the latter two areas.

Impacts on scenic resources would include modifications to existing boulders and the addition of new boulder-like structures within the creek channel. These modifications would, in turn, increase pool elevation and depth, and reduce the vertical drop of some waterfalls. The overall alignment of the creek would not be expected to change. The conspicuousness of these modifications would vary depending upon volume of creek flows. During periods of high flow, views of the concrete weirs may be obscured due to submersion or cascading water. During such periods, the reduced height of waterfalls and the increased size and depth of tailwater pools above the weirs may become more apparent. The opposite may be the case during drier periods with lower creek flows.

Implementation of the proposed fish passage improvements would alter scenic resources (i.e., boulders, tailwater pools, and waterfalls) within the creek channel. As discussed in Section 2, Project Description, a 4- to 8-inch-thick topcoat would be applied to the concrete weirs, and their surfaces would be sculpted to match the texture of adjacent boulders and bedrock. The topcoat would be colored to mimic natural rock features in the vicinity. These measures would minimize the weirs' visual contrast with their natural surroundings and make them less apparent to area visitors. Further reducing the conspicuousness of these improvements, the project is proposed for discrete locations, within an area of the creek that is characterized by considerable natural variability in the size, shape, and color of boulders. Views to the project sites and specific improvements would be mostly limited to views from areas immediately adjacent to or within the creek channel. Modifications to water surface elevations and waterfall drops would be on the order of 2 to 3 feet and limited to creek segments in the vicinities of Features 9, 10, and 11. While the proposed work would alter features that contribute to the Little Yosemite area's scenic character and visual quality, these effects would not be substantial. As noted previously, the major contributors to the area's aesthetic appeal – the dense riparian vegetation, giant boulder assemblages, and cascading waterfalls and clear pools – would remain largely unaffected. For the above reasons, long-term project operation would have a less than significant impact on aesthetic resources. No mitigation is required.

**Impact AE-2: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties. (Less than Significant)**

There would be no substantial sources of light or glare associated with construction of the project that would adversely affect daytime views in the area; and there would be no nighttime construction. Following installation of the concrete weirs and once the curing of the concrete boulders is complete, the temporary wood ramp/stair system and work platform would be removed. All affected areas would be restored to their approximate pre-construction conditions. With respect to glare, similar to what is shown in the bottom image of Figure 5, the proposed concrete boulders would be natural-colored and sculpted to look like surrounding boulders. The artificial boulders would not be painted and no shiny surfaces would exist; therefore, the impact related to glare would be less than significant. No mitigation is required.

**Impact C-AE: The project, in combination with past, present, and reasonably foreseeable future projects in the vicinity would not result in significant cumulative aesthetics impacts. (Less than Significant)**

Table 3 summarizes the present and reasonably foreseeable future projects in the vicinity of the project. The geographic scope for cumulative aesthetics impacts includes all projects that would affect resources within the publicly accessible viewshed of the proposed project. The only projects identified in Table 3 that would have impacts on aesthetic resources that could overlap with those of the proposed project are the Camp Ohlone Road Dust Control Project and Alameda Creek Diversion Dam (ACDD) reconfiguration, which are proposed as part of the SFPUC Calaveras Dam Replacement Project.

The Camp Ohlone Road Dust Control Project involves capping 3.7 miles of the existing Camp Ohlone Road, between Geary Road Bridge and the ACDD, with 6-8 inches of gravel. The capping would occur entirely within the footprint of the existing road surface. As a result, no appreciable aesthetic resources impacts would be anticipated. The ACDD project would result in flow modifications within Alameda Creek. Upon completion, the average annual volume of water flowing down the reach of Alameda Creek from the ACDD to its confluence with Calaveras Creek, including through the Little Yosemite area, would increase by about 10 percent. The average increased volume of water flowing down the creek could partially obscure views of the proposed concrete weirs at Features 9, 10, and 11, which would further reduce potential project-related aesthetic resources impacts.

For these reasons, the Calaveras Dam Replacement Project's aesthetic resources impacts would not combine with those of the proposed project to create a substantial adverse impact compared to existing conditions. The cumulative aesthetic impact would, therefore, be would be less than significant.



### E.3 Population and Housing

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>3. POPULATION AND HOUSING— Would the project:</b>					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Impact PH-1: The project would not induce substantial population growth in an area, either directly or indirectly. (No Impact)**

In general, a project would be considered growth-inducing if it would substantially increase population or new development that might not occur if the project were not implemented. The project does not include the development of residences, additional roads, or infrastructure. Therefore, the project would not be expected to induce population growth.

During the approximately 4-month construction period, an average of 12 construction workers would be onsite per day, and a maximum of 20 workers would be working on any given workday. It is expected that Bay Area regional labor could meet the construction workforce requirements. While some workers could relocate from areas beyond the region, given the project workforce demands and construction-period duration, any such relocation would likely be small and for a limited duration. Minimal operation and maintenance activities are proposed during the 20- to 30-year lifespan of the concrete weirs. Existing SFPUC staff would conduct long-term operation and maintenance activities for the project, and additional personnel would not be hired. Therefore, construction and operation activities associated with the project would not cause a substantial increase in the local population, and no growth-inducement impacts would be expected to result.

**Impact PH-2: The project would not displace substantial numbers of existing housing units or people, necessitating the construction of replacement housing. (No Impact)**

The project site does not contain any existing housing or residential use. Further, the project would not involve displacement of housing or people. Therefore, no impact with respect to the displacement of housing or people is expected.

**Impact C-PH: Construction of the project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not have a cumulative impact on growth or housing. (No Impact)**

Because the proposed project would not result in any project-specific impacts related to growth inducement or housing, project implementation would not contribute to cumulative population or housing impacts.

**E.4 Cultural and Paleontological Resources**

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>4. CULTURAL AND PALEONTOLOGICAL RESOURCES—Would the project:</b>					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco <i>Planning Code</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact CP-1: The project would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code. (No Impact)**

There are no historical resources within the project CEQA Area of Potential Effects (C-APE). No historical resources were identified in the project C-APE during the pedestrian survey by ESA in 2014.

At Staging Area 1, JRP Historical Consultants, LLC completed a historic resources evaluation for the Geary Road Bridge Replacement Project. No cultural resources were identified in the staging area during that investigation.<sup>20</sup> The bridge itself was determined not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources.

As there are no known historical resources in the project C-APE, the project would not cause a substantial adverse change in the significance of a historical resource.

<sup>20</sup> JRP Historical Consulting, LLC, 2010. Geary Road Bridge Replacement Project Historic Resources Evaluation Report. Prepared for San Francisco Public Utilities Commission. June 2010.

**Impact CP-2: The project could cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines Section 15064.5. (Less than Significant with Mitigation)**

ESA completed a records search for the project at the Northwest Information Center (NWIC) of the California Historical Resources Information System on May 6, 2014 (File No. 13-1693). The purpose of the records search was to (1) determine whether known cultural resources have been recorded within the vicinity of the C-APE, (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites, and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The NWIC lists four cultural resources studies that have been completed within a ½-mile radius of the project C-APE. These studies consisted of intensive archeological surface surveys and archeological monitoring primarily related to the Calaveras Dam Replacement Project (CDRP). The project work areas, site access improvements, and Staging Areas 2 and 3 have not been subject to a previous cultural resource investigation. At Staging Area 1, ICF International conducted an archeological survey for the Geary Road Bridge Replacement Project. No cultural resources were identified in the staging area during that investigation.<sup>21</sup>

Two cultural resources have been previously recorded within a ½-mile radius of the project C-APE. Site P-01-010674 is comprised of the Calaveras Dam and associated features. Site constituents include the dam itself as well as historic-period artifact concentrations, a rock wall, an adit, a bridge, and several other structures and features. The second resource, Site P-01-010869, consists of two historic-period artifact concentrations, a large prospect pit, and an isolated prehistoric lithic fragment.

The nearest prehistoric archeological resource is CA-ALA-428/H is a seasonal resource procurement area consisting of midden soils, shell fragments, lithic debitage and tools, and a bedrock milling station. Additionally an ochre-stained grinding area on top of a large blueschist boulder has been previously identified in Alameda Creek. The area was noted during archaeological investigations at CA- ALA-428/H. While the exact location of the site was not known, it was located in the “Little Yosemite area.”<sup>22</sup>

The project would occur in areas of Franciscan bedrock and Holocene-age stream and terrace deposits associated with Alameda Creek.<sup>23</sup> Franciscan bedrock does not have the potential for deeply buried

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<sup>21</sup> ICF International, 2011. Geary Road Bridge Project Archeological Survey Report. Prepared for San Francisco Public Utilities Commission. July 2011.

<sup>22</sup> Leventhal, Alan, Personal communication via telephone with ESA archaeologist Heidi Koenig, June 16, 2014.

<sup>23</sup> Witter, R.C., K.L. Knudsen, J.M. Sowers, C.M. Wentworth, R.D. Koehler, and C.E. Randolph, 2006. Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California. United State Geological Survey Open-file report 2006-1037.

archeological resources.<sup>24</sup> Although there is a moderate potential for buried archeological resources to be found in Holocene-age stream and terrace deposits, because of the limited ground-disturbing activities associated with the project and the dynamic nature of stream and terrace deposits, the potential for encountering buried archeological materials is considered low. Archeological sites in this environment would be primarily identifiable on the existing ground surface.

ESA surveyed the project C-APE on May 8, 2014. The survey consisted of very narrow transects (5 to 10 meters wide) of the staging areas; the foot paths connecting Staging Areas 2 and 3 to Features 9, 10, and 11; and the work areas. All exposed soil was inspected for cultural material indicators such as dark midden soil, lithic fragments, or other evidence of past human use or occupation. All boulders and outcrops were inspected for cultural modifications such as bedrock milling stations or petroglyphs. The blueschist boulder with a grinding area was not identified in the Little Yosemite APE during the surface survey. Visibility in Staging Area 1 near Geary Road Bridge was very limited due to dense vegetation. Vegetation was periodically scraped back to expose the surface. Staging Areas 2 and 3 provided good visibility. Soils were a light to medium brown silty clay with gravels and cobbles. The steep foot paths down to Alameda Creek also provided good visibility. ESA did not identify any cultural materials, including prehistoric or historic-period artifacts or features in the project C-APE work areas, site access improvements, or staging areas.

Based on the assessment described above, there is generally a low potential for uncovering archeological resources during project construction. However, it is possible that previously unrecorded and buried (or otherwise obscured) archeological deposits could be discovered during project ground-disturbing activities. Although expected to be minimal, excavation and the movement of heavy construction vehicles and equipment could expose and have impacts on unknown archeological resources, which would be a significant impact. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-2 (Accidental Discovery of Archeological Resources)**. This measure requires that archeological resources be avoided and, if accidentally discovered, that they be treated appropriately.

#### **Mitigation Measure M-CP-2: Accidental Discovery of Archeological Resources.**

The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in CEQA Guidelines Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor; or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, supervisory personnel, etc.

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<sup>24</sup> Meyer, Jack, and Jeffrey Rosenthal, 2007. Geoarcheological Overview of the Nine Bay Area Counties in Caltrans District 4. Prepared for Caltrans District 4.

The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant, based on standards developed by the Planning Department archeologist. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological consultant 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 project sponsor.

Measures might include: preservation in situ of the archeological resource; an archeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

**Impact CP-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Less than Significant)**

Paleontological resources consist of the fossilized remains of plants and animals. These include vertebrates (animals with backbones); invertebrates (animals without backbones, such as starfish, clams, ammonites,

and marine coral); and fossils of microscopic plants and animals (microfossils). The age and abundance of fossilized remains depend on the location, topographic setting, and particular geologic formation in which the fossils are found. Fossil discoveries not only provide a historical record of past plant and animal life but can assist geologists in dating rock formations. Fossil discoveries can expand the understanding of geologic periods and the geographic range of existing and extinct flora or fauna.

The Society of Vertebrate Paleontology (SVP) has established guidelines for identifying, assessing, and mitigating adverse impacts on nonrenewable paleontological resources.<sup>25</sup> Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring guidelines, which were approved through a consensus of professional paleontologists. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for mitigating adverse construction-related impacts on paleontological resources.

The SVP has helped define the value of paleontological resources. In particular, it indicates that geologic units of high paleontological potential are those from which vertebrate or significant invertebrate or significant suites of plant fossils have been recovered; that is, those that are represented in institutional collections. Sensitivity is determined based on two criteria: (1) the potential for yielding abundant or significant vertebrate fossils or a few significant fossils, large or small, that are vertebrate, invertebrate, plant, or trace fossils; and (2) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonic, biochronological, or stratigraphic data. Rock units that contain potentially datable organic remains older than late Holocene are also classified as having high paleontological potential. These units include deposits from animal nests or middens and units that may contain new vertebrate deposits, traces, or trackways.

Geologic units of low paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

Holocene-age formations in the project site vicinity include the active stream channels and young stream terraces of Alameda Creek. Only one recorded fossil is listed in the University of California Museum of Paleontology (UCMP) database identified in a Holocene-age formation (UCMP, 2014). This geologic unit therefore has a low paleontological potential. Paleontological resources have been identified in the

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<sup>25</sup> Society of Vertebrate Paleontology (SVP), 2013. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. <http://vertpaleo.org/PDFS/24/2482305f-38f8-4c1b-934c-1022d264e621.pdf>, accessed on November 9, 2013.

dynamic environment of active stream channels and the UCMP database lists eight such discoveries in greater Alameda County. However, given the minimal ground disturbance associated with the proposed project, it is unlikely that construction would disturb or destroy a unique or significant paleontological resource.

Project construction would involve minor site preparation and grading (see Table 1 for summary of ground-disturbing activity). All work is expected to be constructed with hand tools and would not require the use of heavy equipment within Alameda Creek. In the event of an unanticipated discovery of a paleontological resource, SFPUC's Standard Construction Measure #9 would apply. This measure specifies that if there is any indication of a paleontological resource during the soils disturbing activity of a project, the contractor shall immediately suspend any soils disturbing activities in the area and notify the SFPUC of such discovery. The SFPUC would then work with the Planning Department's Environmental Review Officer to determine what additional measures should be implemented, based on reports from a qualified paleontological consultant. Because of the low paleontological potential in the project area, the limited ground disturbance, the use of hand tools, and with Standard Construction Measure #9 in place, construction-related impacts on as-yet undiscovered paleontological resources would be less than significant.

**Impact CP-4: The project could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)**

The project is subject to the provisions of California Health and Safety Code Section 7050.5, with respect to the discovery of human remains. California Public Resources Code Section 5097.98 regulates the treatment and disposition of human remains encountered during minor project grading, which may be required to level Staging Area 1, as well as to install the temporary wood ramp/stair system and work platform (see Table 1 summary of ground-disturbing activity). All work within Alameda Creek would occur with hand tools and would not require the use of heavy equipment.

Although no known human burials have been identified within the project site or general vicinity, the possibility of encountering human remains cannot be entirely discounted. Minor earth-moving activities associated with project construction could directly affect previously undiscovered human remains. Therefore, the potential impact regarding disturbance to human remains could be significant. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-4 (Accidental Discovery of Human Remains)**. This measure requires avoidance or the appropriate treatment of human remains if any are accidentally discovered during project implementation.

**Mitigation Measure M-CP-4: Accidental Discovery of Human Remains.**

The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activities shall comply with applicable state laws. This shall include immediate notification of the Alameda County coroner and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission, which shall appoint a most likely descendant (MLD) (Public Resources Code Section 5097.98). The archeological consultant, San Francisco Public Utilities Commission (SFPUC), and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (California Environmental Quality Act [CEQA] Guidelines Section 15064.5[d]). The agreement shall 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 Public Resources Code allows 24 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the SFPUC shall follow Public Resources Code Section 5097.98(b), 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."

**Impact C-CP: Construction of the project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, could result in a significant cumulative impact on cultural resources. (Less than Significant with Mitigation)**

The geographic scope of potential cumulative impacts on historical resources, archeological resources, paleontological resources, and human remains encompasses the project site vicinity and nearby vicinities. All cumulative projects identified in the vicinity (see Table 3) are assumed to cause some degree of ground disturbance during construction and thus contribute to a potential cumulative impact on buried cultural resources.

Background research suggests that there are no historical resources in the project C-APE. Background research also suggests that the potential to encounter archeological resources, paleontological resources, or human remains would be low; however, as described in Impacts CP-2 through CP-4 above, the project would have the potential to affect unknown resources should they be present on the project site. These impacts, in combination with those of the other identified cumulative projects, create the potential for a cumulative impact that would be significant without mitigation. With implementation of **Mitigation Measure M-CP-2 (Accidental Discovery of Archeological Resources)** and **Mitigation Measure M-CP-4 (Accidental Discovery of Human Remains)**, however, the project's contribution to the potential cumulative impact would be less than cumulatively considerable (i.e., less than significant with mitigation).



## E.5 Transportation and Circulation

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>E.5. TRANSPORTATION AND CIRCULATION –</b>					
<b>Would the project:</b>					
a) 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 transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As explained below, the proposed Little Yosemite Fish Passage project would not result in construction and/or operational impacts related to air traffic patterns. Due to the nature and scope of the proposed project, no changes to air traffic patterns would be expected to result from project implementation. In addition, the project would not involve the installation of structures that could interfere with air space. Therefore, Topic 5 (c) is not applicable to the proposed project.

### *Setting*

The project site is located in unincorporated Alameda County. The study area considered for this impact analysis includes the network of regional highways and local roadways that would be used by construction workers and vehicles for access to the project site.

### Regional and Local Roadways

Interstate 680 (I-680) provides regional access to the project site. I-680 is a four- to eight-lane freeway that extends between I-280 and U.S. 101 in San Jose and Interstate 80 (I-80) in Fairfield. I-680 serves as a

primary north-south regional route, connecting the Livermore–Amador Valley with Contra Costa County in the north and the Santa Clara Valley in the south. I-680 in the project site vicinity has access via on- and off-ramps at Calaveras Road and State Route 84 (SR 84) (also Paloma Road) in Alameda County.

Calaveras Road and Geary Road provide the primary access to the project site. Calaveras Road is a two-lane roadway (one lane in each direction) and, in the vicinity of the project site, has relatively flat grades and a straight alignment. The posted speed limit on Calaveras Road is 50 miles per hour (mph). Geary Road connects with Calaveras Road and is a two-lane road (one lane in each direction), with shoulders on both sides in most locations. The road provides access to Camp Ohlone Road and the Sunol Regional Wilderness area. The project site is off of Camp Ohlone Road, which is a single-lane dirt road closed to vehicular traffic but open to recreational pedestrian uses during the daytime.

Weekday traffic on I-680 consists primarily of commuter traffic during peak periods (generally between the hours of 7 a.m. and 9 a.m., and 4 p.m. and 6 p.m.), and a mix of residential, commercial, and industrial traffic throughout the day. Recent data published by the California Department of Transportation (Caltrans) for 2012 indicate that the average daily traffic volume on I-680 in the vicinity of the project site is about 149,000 vehicles per day at Calaveras Road/SR 84, with peak-hour volumes of about 11,500 vehicles per hour.<sup>26</sup> Trucks represent about 9 percent of the total daily traffic volumes.<sup>27</sup>

#### Transit Service

Alameda County Transit (AC Transit) is the principal bus service provider in Alameda County. There is no AC Transit bus service along Geary Road or Calaveras Road.

#### Bicycle and Pedestrian Circulation

Bikeways are typically classified as Class I, Class II, or Class III facilities. Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists and pedestrians. Class II bikeways are bike lanes striped within the paved areas of roadways and established for the preferential use of bicycles, while Class III bikeways are signed bike routes that allow bicycles to share streets or sidewalks with vehicles or pedestrians. Geary Road and Calaveras Road south of I-680 are not part of the designated Alameda Countywide Bicycle Network.<sup>28</sup> However, the East Bay Bicycle Coalition has identified Calaveras Road in Alameda County as an on-road

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<sup>26</sup> California Department of Transportation (Caltrans), 2012. 2012 Traffic Volumes on California State Highways. Online at <http://traffic-counts.dot.ca.gov>. Accessed June 17, 2014.

<sup>27</sup> California Department of Transportation (Caltrans), 2012. 2012 Annual Average Daily Truck Traffic on the California State Highway System. Online at <http://traffic-counts.dot.ca.gov>. Accessed June 17, 2014.

<sup>28</sup> Alameda County Transportation Commission (Alameda CTC), 2014. Alameda Countywide Bicycle Plan. October 2012. Online at [http://www.alamedactc.org/app\\_pages/view/5390](http://www.alamedactc.org/app_pages/view/5390). Accessed June 17, 2014.

route recommended for bicycle travel.<sup>29</sup> Calaveras Road experiences considerable recreational bicycle use on weekends, while bicycle volumes are generally low on weekdays.

There are no sidewalks or designated pedestrian facilities on Geary Road or Calaveras Road. Pedestrian volumes are very low throughout the day, as the predominant mode of travel in the area is by automobile. As noted above, Camp Ohlone Road is a single-lane dirt road closed to vehicular traffic but open to recreational pedestrian uses within the Sunol Regional Wilderness during the daytime.

### *Construction Impacts*

This impact analysis evaluates the potential for short-term impacts on roadways due to construction-related changes in roadway capacities or increases in construction-related traffic. The level of service (LOS) standards established by Alameda County in its congestion management program are intended to regulate long-term traffic impacts resulting from a project and do not apply to temporary construction projects. In addition, construction of the proposed project would not permanently change the existing or planned alternative transportation network in Alameda County and therefore would not conflict with policies, plans, or programs related to transit, bicycle, or pedestrian travel. The impact of the proposed project on these significance criterion are not applicable to the project's construction activities, and are only discussed below under Impact TR-4 as it relates to operational impacts.

Construction of the proposed project is estimated to require a total of 4 months to complete, and project construction would generally occur on weekdays between 8 a.m. and 5 p.m.; however, if needed, construction could occur between 7 a.m. and 7 p.m. No nighttime construction or weekend work is anticipated. The project site has access from the I-680 interchange at Calaveras Road and is located approximately 6.5 miles southeast of I-680 on Geary Road. Access to the three fish passage improvement sites would be via existing foot paths from Camp Ohlone Road and over temporary wood ramp/stair systems.

### **Impact TR-1: The project would not 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)**

The plans, ordinances, and policies of local jurisdictions and county agencies that establish measures of effectiveness for the performance of the circulation system are intended to address potential long-term and permanent project effects on the circulation system (e.g., roadways, sidewalks, and bicycle and transit facilities). Due to the nature of the Little Yosemite Fish Passage Project (concrete weirs within

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<sup>29</sup> East Bay Bicycle Coalition, 2009. Bicycle Map, Map 2: East of the Hills.

Alameda Creek allowing fish to migrate upstream through Little Yosemite), the project would not permanently affect the transportation and circulation system; therefore, this analysis assesses potential temporary impacts on the overall transportation and circulation system during construction activities, including roadways, public transit, bicycle facilities, and pedestrian facilities.

#### Impacts on Roadways

The project would not conflict with established plans, ordinances, or policies pertaining to the performance of the circulation system because, as described below, construction activities would occur within the SFPUC right-of-way, the project would not permanently change the circulation system, the project would be limited in duration, and construction activities would not result in a substantial increase in vehicles traveling along local roadways. Project construction may require closure of a portion of Camp Ohlone Road for a period of up to 8 days during concrete weir installation. While Camp Ohlone Road is closed to public vehicle traffic, the road serves as the primary access route for a number of properties within the area. As discussed in Section A, Project Description, the SFPUC would coordinate any necessary road closures with the EBRPD, provisions would be made to ensure property owners and lessees have access to properties adjacent to Camp Ohlone Road (i.e., travel lanes would be reopened and construction vehicles would move to the side of the road to accommodate any passing property owner or lessee; flaggers would waive permitted vehicles through the work area), and property owners would be notified of potential closures or detours in advance of construction onset.

Construction traffic would result in short-term increases in traffic volumes on Geary Road, Calaveras Road, and I-680. Construction-related vehicle trips would include construction workers traveling to and from the Little Yosemite project site and haul truck trips associated with materials and equipment deliveries. The number of construction-related vehicles traveling to and from the project site would vary on a daily basis depending on the construction phase, planned activity, and materials needs. Construction-related trips to and from the project work area would be distributed throughout the day. Construction workers would travel to and from the project site based on a work shift that would generally occur on weekdays between 8 a.m. and 5 p.m. Trucks delivering equipment and materials to the project site from offsite locations would also generally travel during these times. Truck deliveries and hauling to and from the site would not occur on weekends or during nighttime hours. Based on preliminary SFPUC estimates of construction workers and equipment and supplies required to conduct the work, the proposed project would generate a maximum of 10 vehicle trips (i.e., 5 vehicles traveling to and from the project site) on a daily basis.

The addition of up to 10 vehicle trips on a daily basis on I-680, Calaveras Road, and Geary Road would represent a minimal increase in daily and peak-hour traffic volumes (less than 1 percent). Therefore, the

traffic impact from short-term increases in traffic volumes during construction of the project would be less than significant.

#### Impacts on Public Transit

Since there are no public transit routes on Geary Road or Calaveras Road, project construction vehicles would not affect transit operations. Thus, no impact on public transit would occur.

#### Impacts on Bicycle Facilities

There are no bicycle facilities on Geary Road or Calaveras Road; bicyclists currently share the travel lanes with vehicles. Throughout the 4-month construction period, bicycle travel on Geary Road and Calaveras Road would be maintained. Temporary closure of a portion of Camp Ohlone Road may be required during certain phases of construction, and the SFPUC would coordinate any necessary road closures with the EBRPD. Since bicycle travel in the area would be maintained throughout the construction period, and since the number of construction vehicles generated on a daily basis would not be substantial (about 5 vehicles, or 10 vehicle trips on a daily basis), project-related impacts on bicycle travel along Geary Road and Calaveras Road would be less than significant. Potential impacts related to bicycle safety are addressed below under Impact TR-3.

#### Impacts on Pedestrian Travel

There are no pedestrian facilities on Geary Road or Calaveras Road, and pedestrian volumes are very low on Geary Road and Calaveras Road throughout the day. Therefore, construction traffic would not substantially affect pedestrian travel on Geary Road or Calaveras Road, and construction-related impacts on pedestrian travel would be less than significant.

Camp Ohlone Road is a single-lane dirt road closed to vehicular traffic but open to recreational pedestrian uses within the Sunol Regional Wilderness during the daytime. Camp Ohlone Road would be used for access to the project site for construction vehicles and equipment, although the number of construction vehicles using Camp Ohlone Road would be minimal. Temporary closure of a portion of Camp Ohlone Road may be required during certain phases of construction, and the SFPUC would coordinate any necessary road closures with the EBRPD. Because pedestrian travel in the area would be maintained throughout the construction period, with the exception of a temporary 8-day closure of Camp Ohlone Road, project-related impacts on pedestrians would be less than significant. Potential impacts related to pedestrian safety are addressed below under Impact TR-3.

**Impact TR-2: Project construction activities would not result in inadequate emergency access. (Less than Significant)**

Project construction activities would not occur within the travel lanes of Geary Road or Calaveras Road. Construction-related traffic associated with project activities would not be substantial (up to 10 vehicle trips per day) and would not pose an obstacle to emergency response along Geary Road or Calaveras Road. Access to Camp Ohlone Road by emergency vehicles would be maintained at all times during construction; travel lanes would be reopened and construction vehicles would move to the side of the road to accommodate any passing emergency vehicles, and flaggers would waive emergency vehicles through the work area. Therefore, impacts on emergency access during construction would be less than significant.

**Impact TR-3: Project construction activities would not decrease the safety of public roadways for vehicles, bicyclists, and pedestrians. (Less than Significant)**

Implementation of the Little Yosemite Fish Passage project would not permanently change the existing or planned transportation network and would not include any design features that would permanently increase the potential for traffic safety hazards. However, construction vehicles traveling to and from the project site would share the roadway with other vehicles as well as with bicyclists and pedestrians. The use of Geary Road and Calaveras Road for access to the project site 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 greatest increase in the number of proposed project-related construction vehicles using Geary Road and Calaveras Road for access to the site would occur on weekdays, when there would be an average of 10 construction vehicle trips per day to and from the project site. Because project-generated vehicle trips would occur on weekdays when there are few pedestrians and bicyclists on Geary Road and Calaveras Road, the potential for conflicts and increased traffic safety hazards would be limited, and impacts related to safety of public roadways for vehicles, bicyclists, and pedestrians would be less than significant.

***Operational Impacts***

This impact analysis evaluates the potential for long-term impacts associated with operation of the proposed project.

**Impact TR-4: Vehicle trips generated during project operations and maintenance activities would not substantially conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, or conflicts with an applicable congestion management program. (Less than Significant)**

After completion of project construction activities, the concrete weirs may need to be inspected, patched, or repaired periodically throughout their lifespan (typically 20 to 30 years), and the periodic inspections

and maintenance would not generate a substantial number of new vehicle trips. Overall, any increases in traffic generated by periodic inspections and maintenance activities would be minimal and would not result in a noticeable increase in traffic on Geary Road or Calaveras Road. Therefore, because the proposed project would not result in long-term impacts on roadways used for access to the project site vicinity, and because Geary Road and Calaveras Road—the primary access roads to Camp Ohlone Road and the project site—are not part of the Alameda County congestion management program (CMP) network, potential impacts on adopted policies, plans, or programs and the local congestion management program would be less than significant.

### *Cumulative Impacts*

#### **Impact C-TR: Construction of the proposed project could contribute considerably to cumulative traffic increases and safety hazards on local and regional roads. (Less than Significant with Mitigation)**

The geographic scope for potential cumulative impacts related to transportation and circulation encompasses roadways in the Sunol Valley (Geary Road between the Camp Ohlone Road and Calaveras Road, Calaveras Road between Geary Road and I-680, the I-680 on- and off-ramps at Calaveras Road, and I-680 in the vicinity of the Calaveras Road crossing). Existing land uses, including the SMP-30 sand and gravel quarry, the existing nursery at the Calaveras Road/I-680 interchange, and recreational park facilities in the southern Sunol Valley, account for current traffic conditions along Geary Road and Calaveras Road. I-680 is a major interstate highway; general growth and development within the region has contributed to traffic on this roadway.

As described above in Impact TR-1, construction of the project would result in a temporary (approximately 4-month) increase in vehicle trips on Geary Road and Calaveras Road between the project area and I-680, and on I-680. Construction activities associated with the project are expected to occur between April and July 2016.

Of the cumulative projects listed in Table 3, only those that would have access via Geary Road and Calaveras Road and that have overlapping construction schedules could contribute to cumulative traffic impacts on these roadways; these projects include the SFPUC Alameda Creek Diversion Dam Fish Passage Project (on Geary Road and/or on Calaveras Road), the SFPUC Calaveras Dam Replacement Project (on Calaveras Road), the SFPUC Sunol Long-Term Improvement Project (on Calaveras Road), the SMP-30 Quarry Expansion and Cutoff Wall (SMP-30 Expansion) Project (on Calaveras Road) and various SFPUC pipeline inspection projects. The construction schedules of the Alameda Creek Fish Passage and Water Supply Reliability Improvements Project, the Arroyo Mocho Stanley Ranch Restoration Project, and the Stream Management Master Plan Improvements Project would overlap with the proposed project but



would not use Geary Road or Calaveras Road for access to the project sites. No residential or commercial projects are currently being developed in the immediate project site vicinity that would increase traffic.

The SFPUC Camp Ohlone Road Dust Control Project, the SFPUC Geary Road Bridge Replacement Project, the SFPUC San Antonio Backup Pipeline Project, the SFPUC New Irvington Tunnel Project, the SFPUC Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project, the Completed Fish Passage Project, and the PG&E Pipeline Crossing Project are either already completed or would be completed prior to construction of the project and would not affect cumulative traffic volumes. Certain future cumulative projects would not have overlapping construction schedules (i.e., the Alameda Creek Recapture Project, the I-680 Sunol Expressway Project, and the Alameda Creek Bridge Replacement Project), or would not affect or be affected by traffic on Geary Road and Calaveras Road (i.e., the Alameda County Fire Department Sunol Project, the Alameda County Route 84 Expressway Widening Project, and the Niles Canyon Short-Term Projects).

As discussed in Impact TR-1, construction of the proposed Little Yosemite Fish Passage Project would include a maximum of 10 construction-related vehicle trips (i.e., both construction vehicles and construction worker trips) on a daily basis, and would not contribute considerably to cumulative traffic volumes on Geary Road, Calaveras Road, or I-680. However, the proposed project could contribute considerably to the cumulative traffic safety hazards on Geary Road, Calaveras Road, or I-680 during overlapping construction activities of the cumulative projects discussed above. **Mitigation Measure M-C-TR (Traffic Control Plan)** has been identified to reduce potential temporary cumulative traffic safety hazards to a less-than-significant level.

#### **Mitigation Measure M-C-TR: Traffic Control Plan.**

The SFPUC or its contractor(s) shall prepare and implement a traffic control plan. The plan shall conform to the State's *Manual of Traffic Controls for Construction and Maintenance Work Areas*,<sup>30</sup> where applicable. Elements of the traffic control plan shall include, but not be limited to, the following:

- Advance warning signs shall be installed on Geary Road advising motorists, bicyclists, and pedestrians of the presence of construction vehicles in order to minimize hazards associated with construction activities immediately adjacent to Geary Road, including the entry and egress of project-related construction vehicles.
- Pedestrian and bicycle access and circulation shall be maintained during project construction where it is safe to do so.
- A public information program shall be developed and implemented to advise motorists, bicyclists, and nearby property owners of the impending construction activities (e.g., media

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<sup>30</sup> California Department of Transportation (Caltrans), 2014. California Manual on Uniform Traffic Control Devices for Streets and Highways: Part 6 Temporary Traffic Controls, 2012 Edition. Online at <http://www.dot.ca.gov/hq/traffops/engineering/control-devices/trafficmanual-current.htm>. Accessed June 19, 2014.

coverage, 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.
- Adequate driving and bicycling conditions on Geary Road shall be maintained throughout the construction period.
- The SFPUC and its contractors shall coordinate individual traffic control plans for SFPUC projects in the Sunol Valley.

This measure would require that the SFPUC take actions to minimize traffic safety hazards during construction (i.e., through the installation of signs to warn motorists, bicyclists, and pedestrians of the construction zone; use of flaggers or illuminated signs, as appropriate). Therefore, this impact related to increased safety hazards during construction would be less than significant with mitigation.

After construction activities associated with the project are completed, the concrete weirs may need to be inspected, patched, or repaired periodically throughout their lifespan (typically 20 to 30 years). Periodic inspections and maintenance would not generate a substantial number of new operational trips. In addition, the combined number of vehicle trips associated with operation and maintenance of other cumulative SFPUC projects in the Sunol Valley (i.e., the SFPUC San Antonio Backup Pipeline, Alameda Creek Diversion Dam Fish Passage, Geary Road Bridge Replacement, Alameda Creek Recapture, Sunol Long-term Improvement, and Calaveras Dam Replacement Projects) would be minimal, if any, and would not result in a noticeable increase in traffic on either Geary Road or Calaveras Road. Over the long-term, these projects would not contribute considerably to cumulative traffic volume increases on Geary Road, Calaveras Road, or I-680. Similarly, the project’s cumulative contribution to regional transportation and circulation impacts would not be substantial and the impact would be less than significant.

## E.6 Noise

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>6. NOISE—Would the project:</b>					
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>6. NOISE—Would the project:</b>					
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Be substantially affected by existing noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no structures or buildings located within a mile of the project site, so vibration generated by proposed construction activities would have no potential to result in vibration or groundborne noise impacts to building occupants. The project site is not within an airport land use plan area and is not in the vicinity of a private airstrip, and the project also would not include development of noise-sensitive facilities that would be affected by existing noise levels. Therefore, Topics 6(b), 6(e), 6(f), and 6(g) are not applicable to this project.

Project implementation would result in increases in noise and vibration in the vicinity of the project site. These issues are discussed below.

### *Noise Descriptors*

Sound is a phenomenon that occurs in a medium (such as air or water), and the manner in which sound travels through this medium is influenced by the physical properties of the medium (such as temperature, density, and humidity). The amount of energy in the sound is proportional to the pressure it generates in the medium. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound, and the decibel (dB) scale is used to quantify this sound pressure level, or sound intensity. Because sound can vary in intensity by more than 1 million times within the range of human hearing, a logarithmic scale is used to keep sound pressure measurements within a convenient and manageable range. Because the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called “A-weighting,” expressed as “dBA.” The A-weighted decibel, dBA, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of

loudness. The noise levels presented in this section are expressed in terms of dBA unless otherwise indicated. **Table 4** shows some representative noise sources and their corresponding noise levels in dBA.

**TABLE 4**  
**TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT**

Examples of Common, Easily Recognized Sounds	A-Weighted Decibels (dBA)	Subjective Evaluations
Near Jet Engine	140	Deafening
Threshold of Pain	130	
Threshold of Feeling – Hard Rock Band	120	
Accelerating Motorcycle (at a few feet away)	110	
Loud Horn (at 10 feet away)	100	Very Loud
Noisy Urban Street	90	
Noisy Factory	85 <sup>a</sup>	
School Cafeteria with Untreated Surfaces	80	Loud
Lawnmower	70 <sup>b</sup>	
Near Freeway Auto Traffic	60 <sup>b</sup>	Moderate
Average Office	50 <sup>b</sup>	
Soft Radio Music in Apartment	40	Faint
Average Residence without Stereo Playing	30	
Average Whisper	20	Very Faint
Rustle of Leaves in Wind	10	
Human Breathing	5	
Threshold of Audibility	0	

<sup>a</sup> Continuous exposure above 85 dBA is likely to degrade the hearing of most people.

<sup>b</sup> Range of speech is 50 to 70 dBA.

SOURCE: U.S. Department of Housing and Urban Development, 1985. The Noise Guidebook. Office of Community Planning and Development <http://www.hud.gov/offices/cpd/environment/training/guidebooks/noise/index.cfm> (accessed January 16, 2012).

Planning for acceptable noise exposure must take into account the types of activities and corresponding noise sensitivity in a specified location for a generalized land use type. Some general guidelines are as follows: noise levels above 35 dBA can disturb sleep; noise levels of 60 dBA begin to interfere with human speech; prolonged exposure to noise levels greater than 85 dBA can damage hearing.<sup>31</sup>

Variations in noise exposure over time are typically expressed in terms of a steady-state energy level (called Leq) that represents the acoustical energy of a given measurement. Leq (24) is the Leq measured

<sup>31</sup> U.S. EPA, 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Condensed Version). Washington D.C. (EPA/ONAC 550/9-74-004).

over a 24-hour period. Because community receptors, such as residences and hospitals, are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for planning purposes, an artificial dBA increment be added to “quiet time” noise levels to form a 24-hour noise descriptor called the community noise equivalent level (CNEL). CNEL adds a 5-dBA “penalty” during the evening hours (7 p.m. to 10 p.m.) and a 10-dBA penalty during nighttime hours (10 p.m. to 7 a.m.). Another 24-hour noise descriptor, called the day-night noise level (Ldn), is similar to CNEL. Both CNEL and Ldn add a 10-dBA penalty to all nighttime noise events between 10 p.m. and 7 a.m., but Ldn does not add the evening 5-dBA penalty. In practice, Ldn and CNEL usually differ by less than 1 dBA at any given location for transportation noise sources. Lmax is the maximum, instantaneous noise level registered during a measurement period.

**Impact NO-1: The project would not result in exposure of persons to or generation of noise levels in excess of standards established in local general plans or noise ordinances, or applicable standards of other agencies. (Less than Significant)**

The project would involve the construction of bedrock/boulder-shaped concrete weirs along a 0.4-mile long reach of Alameda Creek. The project site is located in unincorporated Alameda County.

Project construction has the potential to result in short-term noise increases that could be in excess of the Alameda County Noise Ordinance standards. The Alameda County General Ordinance Code (Section 6.60.070(E)) specifies the following time limits: 7 a.m. to 7 p.m. on weekdays and 8 a.m. to 5 p.m. on weekends. Construction activities occurring within these time limits are not subject to any noise limits. However, construction activities occurring outside of these time limits are subject to the following noise limits: 58 dBA ( $L_{eq}$ ) between 7 p.m. and 10 p.m. and 53 dBA ( $L_{eq}$ ) from 10 p.m. to 7 a.m.<sup>32</sup>

A noise impact is considered significant if noise levels are in excess of the standards established in the Alameda County Noise Ordinance. This analysis compares proposed hours of construction with time limits specified in the Alameda County Noise Ordinance. Since noise limits within a zoning district generally apply to the operation of stationary equipment and not construction, these limits are only used as a threshold where construction is proposed to occur beyond the ordinance time limits (evening and nighttime construction).

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<sup>32</sup> These maximum noise limits are derived from Table 6.60.040A in Section 6.60.040 of the Alameda County General Ordinance Code (Title 6, Health and Safety, Chapter 6.60), which specifies exterior noise level standards at receiving single- or multiple-family residential, school, hospital, church, and public library uses, and they are categorized based on the duration of exposure to a given noise level (i.e., the “cumulative number of minutes in any one-hour time period”). This section of the code also specifies that the applicable standard must be adjusted to equal the existing ambient noise level if the measured ambient noise level exceeds the applicable noise level standard. Given the absence of noise sources in the project site vicinity, no adjustment to this standard has been made (e.g., ambient levels do not exceed specified limits).

Construction is expected to occur primarily during daytime hours (8 a.m. to 5 p.m.) Monday through Friday, and occasionally extending to 7 a.m. to 7 p.m. (weekdays only) if necessary. No nighttime or weekend construction is anticipated. Since construction activities would occur within the time limits specified in the Alameda County Noise Ordinance (7 a.m. to 7 p.m. on weekdays), project construction activities would not be subject to ordinance noise limits. The only exception would be the generator that would power water pump(s), which is proposed to operate continuously (24 hours per day) during the entire 78-day construction duration.

The two closest residential receptors are a private residence located at 3638 Welch Creek Road, approximately 1.5 miles northeast of the project site, and the East Bay Regional Park District (EBRPD) caretaker's residence, located approximately 1.2 miles northwest of the site. At these distances, operation of a generator<sup>33</sup> would result in a noise level of approximately 40 dBA or less ( $L_{eq}$ ; even lower when topography is considered), well below the County's nighttime noise limit of 53 dBA ( $L_{eq}$ ). Therefore, construction noise levels would be consistent with Alameda County time and noise limits, and these residential receptors would not be significantly affected by project construction. The noise impact would be less than significant.

Hikers using Camp Ohlone Road, Canyon View Trail, and Cerro Este Trail could be subject to construction noise on sections of trails with a direct line-of-sight to the project vicinity. Potential short-term noise impacts would be less than significant, however, because hikers would be subject to this noise for a limited duration (as they pass the project vicinity) or could use other trails to avoid construction noise altogether. Although the impact would be less than significant, the SFPUC proposes to coordinate with the EBRPD to post informational signs at the trailheads of affected trails so that hikers can choose to use an alternative trail if they wish to avoid construction noise.

**Impact NO-2: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (No Impact)**

The proposed project would facilitate steelhead passage in Alameda Creek upstream of Little Yosemite by altering water surface elevation at selected areas which would reduce the velocity of flow in these reaches of Alameda Creek during certain flow conditions. The project would not increase the ambient noise levels and would have very minor, if any, noticeable effects on existing noise conditions. Therefore, the proposed project would have a no impact with respect to substantial permanent increases ambient noise levels.

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<sup>33</sup> The reference noise level for a generator applied in this analysis is 82 dBA ( $L_{eq}$ ) at 50 feet (U.S. Federal Highway Administration, *Construction Noise Handbook, Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors*, July 5, 2011).



**Impact NO-3: The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)**

Construction activities are expected to occur primarily from Monday through Friday, 8 a.m. to 5 p.m., but could occasionally extend earlier (7 a.m.) or later (7 p.m.) so work could be completed on a specific component. No evening or nighttime (i.e., 7 p.m. to 7 a.m.) construction activities are proposed. To address this significance criterion, a “substantial” temporary noise increase is defined as an increase in noise to a level that causes interference with land use activities at nearby sensitive receptors during the day and evening. Since this project is located far from sensitive receptors, this analysis considers whether construction noise would result in noticeable noise increases in ambient noise levels to evaluate whether the project’s temporary noise increases are considered “substantial.”

Noise measurements collected in support of the Calaveras Dam Replacement Project EIR<sup>34</sup> indicate that ambient noise levels at several rural residential receptors located south of Calaveras Dam range between 46 and 48 dBA (Leq) during the day (7 a.m. to 7 p.m.), 38 to 43 dBA (Leq) during the evening hours (7 p.m. to 10 p.m.), and 34 to 40 dBA (Leq) during the night (10 p.m. to 7 a.m.), with noise levels varying with proximity to either Calaveras Road or Marsh Road.<sup>35</sup> It is estimated that ambient noise levels in the vicinity of the closest residential receptors (EBRPD residence and Welch Creek Road residence) would be similar to these levels.

The types of construction equipment proposed for use in the project that would generate substantial levels of noise are listed in **Table 5**. As indicated in this table, typical maximum noise levels for these types of equipment range from about 76 to 90 dBA at a distance of 50 feet from the source. Given the setback distances of over a mile plus intervening topography, it is estimated that project-generated construction noise would generate maximum noise levels of 24 dBA (Leq) during the day (7 a.m. to 7 p.m.) and 14 dBA during the evening and nighttime hours (7 p.m. to 7 a.m.). Such levels would be less than estimated ambient noise levels, and therefore, project-related construction activities would not result in temporary increases in ambient noise levels that are noticeable at the locations of the nearest sensitive receptors. The impact would therefore be less than significant.

Project construction activities would cause a temporary increase in vehicle and truck noise along Geary and Calaveras Roads, the only access routes to the project site. However, the low number of vehicles and trucks associated with the project (four vehicles [eight trips] per day and one truck [two trips] per day) would not measurably increase ambient noise levels along these roadways.

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<sup>34</sup> San Francisco Planning Department, 2011. Calaveras Dam Replacement Project Final EIR, File No. 2005.016E, January 27, 2011.

<sup>35</sup> Vibro-Acoustic Consultants, 2009. Calaveras Dam Replacement Project – Construction Noise Impact Survey Report, Milpitas, CA, March 18, 2009.

**TABLE 5  
ESTIMATED CONSTRUCTION NOISE LEVELS (dBA) AT THE  
CLOSEST SENSITIVE RECEPTOR (EBRPD RESIDENCE)**

Project Activity and Receptor Location	Maximum Noise Source	Reference Hourly Leq in dBA at 50 feet <sup>a</sup>	Distance Between Project and Closest Residential Receptor (feet)	Distance Adjustment	Leq Adjusted for Distance	Topography Adjustment	Leq Adjusted for Topography	Estimated Daytime Ambient at EBRPD Residence <sup>b</sup>	Exceeds Ambient?
<i>Daytime Equipment Operation</i>									
EBRPD Residence	Rock Drill	85	6,300	-51	34	-15	19	46	No
	Concrete/Rock Saw	90	6,300	-51	39	-15	24	46	No
	Concrete/Gunite Pump	82	6,300	-51	31	-15	16	46	No
	Various Trucks	76	6,300	-51	25	-15	10	46	No
	Generator	80	6,300	-51	29	-15	14	46	No
<i>Nighttime Equipment Operation</i>									
EBRPD Residence	Generator	80	6,300	-51	29	-15	14	46	No

NOTES: dBA = A-weighted decibel; Leq = equivalent continuous noise level; EBRPD = East Bay Regional Park District.

<sup>a</sup> Reference noise levels represent noise levels for similar equipment types (without controls) at 50 feet. These estimates assume that one piece of equipment would be operated 100 percent of the time at full throttle at the closest possible distance to the receptor. While unlikely to occur, this worst-case assumption is intended to offset the variable proximity of multiple pieces of equipment operating in the project site vicinity with variable throttle speeds and durations during any given hour.

<sup>b</sup> Estimated daytime ambient noise level is based on noise measurements taken by Vibro-Acoustic Consultants, *Calaveras Dam Replacement Project – Construction Noise Impact Survey Report, Milpitas, CA, March 18, 2009.*

SOURCE: U.S. Department of Transportation, Federal Highway Administration, *Construction Noise Handbook, 9.0 Construction Equipment Noise Levels and Ranges, Table 9.1, RCNM Default Noise Emission Reference Levels and Usage Factors.* July 2011. Available online at [http://www.fhwa.dot.gov/environment/noise/construction\\_noise/handbook/handbook09.cfm](http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm).

Vibro-Acoustic Consultants, *Calaveras Dam Replacement Project – Construction Noise Impact Survey Report, Milpitas, CA, March 18, 2009.*

Since noise increases from four passing vehicles and one passing truck would be temporary and occasional, the noise impact from the project's offsite vehicle and truck operations is considered to be less than significant.

After construction activities associated with the project are completed, the concrete weirs may need to be inspected, patched, or repaired periodically throughout their lifespan (typically 20 to 30 years). Periodic inspections and maintenance associated with project operations would not generate substantial noise levels or a substantial number of new operational trips along Geary and Calaveras Roads. In addition, the combined number of vehicle trips associated with operation and maintenance of other cumulative SFPUC projects in the Sunol Valley (i.e., San Antonio Backup Pipeline, Alameda Creek Diversion Dam Fish Passage, Geary Road Bridge Replacement, Alameda Creek Recapture, Sunol Long-term Improvement Projects) would be minimal, if any, and would not result in a noticeable increase in traffic noise levels on either Geary Road or Calaveras Road. Therefore, the proposed project would have a less-than-significant impact with respect to substantial periodic increases in ambient noise levels.

**Impact C-NO: The project would not contribute to cumulative temporary noise increases along Geary and Calaveras Roads. (Less than Significant)**

For cumulative construction-related noise and vibration impacts, the geographic scope of analysis encompasses the sensitive residential receptors in the vicinity of the project site and along access roads. These sensitive receptors are a private residence located at 3638 Welch Creek Road approximately 1.5 miles northeast of the project site, and the EBRPD caretaker's residence approximately 1.2 miles northwest of the site. The two roads providing access to the project site are Geary and Calaveras Roads.

As discussed in Impacts NO-1 and NO-3, construction-related noise impacts associated with project-related construction activities and truck operations were determined to be less than significant. As indicated in Table 3, there are several cumulative projects that have construction schedules that could overlap with the proposed project's construction schedule. However, since none of these projects is located close to the project site or staging areas, cumulative noise increases in the site vicinity as a result of simultaneous construction activities would not be expected.

As indicated in Impact NO-1 above, hikers using trails in the project vicinity could be subject to construction noise on various sections of trails as they encounter different projects along the trails, however hikers are not considered sensitive noise receptors. Potential short-term noise effects on hikers would be negligible, however, because hikers would be subject to this noise for a limited duration (if they travel on trails that pass vicinities of more than one cumulative project). Hikers would have the option of using other trails to avoid construction noise from the various cumulative projects altogether. Although

not a significant noise impact, the SFPUC would coordinate with the EBRPD as described in the Project Description to post informational signs at the trailheads of affected trails so that hikers can choose to use an alternative trail if they wish to avoid construction noise.

During construction of the Little Yosemite Fish Passage Project, construction vehicles would use Calaveras and Geary Roads for access to the project site from I-680. The proposed project would generate an average of eight vehicle trips and two truck trips per day and project-related traffic would only occur during the less noise-sensitive weekday, daytime hours. Although the project’s construction-related vehicular and truck traffic noise increases on Geary and Calaveras Roads would be less than significant (Impact NO-3), the project’s traffic increases would contribute to potentially substantial cumulative traffic noise increases associated with other cumulative projects in the Sunol Valley that are scheduled to be constructed concurrently, including the SFPUC Alameda Creek Diversion Dam Project, Calaveras Dam Replacement Project, Sunol Valley Water Treatment Plant Expansion Treated Water Reservoir Project (SVWTP Expansion Project), and various SFPUC pipeline inspection projects. However, since the project would only contribute to cumulative construction-related traffic noise increases during the less noise-sensitive weekday, daytime hours and would only generate two truck trips per day, the project’s contribution to this cumulative impact would not be cumulatively considerable and would represent a less-than-significant impact.

## E.7 Air Quality

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less-Than-Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>7. AIR QUALITY—Would the project:</b>					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the nine-county San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, Alameda,

Contra Costa, Marin, San Mateo, Santa Clara, and Napa Counties and portions of Sonoma and Solano Counties. The BAAQMD is responsible for attaining and maintaining air quality in the SFBAAB within federal and State air quality standards, as established by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively. Specifically, the BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the SFBAAB and to develop and implement strategies to attain the applicable federal and State standards.

### *2010 Clean Air Plan*

The CAA and the CCAA require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, the *2010 Clean Air Plan*, was adopted by the BAAQMD on September 15, 2010. The *2010 Clean Air Plan* updates the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases in a single, integrated plan; and establish emission control measures to be adopted or implemented. The *2010 Clean Air Plan* contains the following primary goals:

- Attain air quality standards;
- Reduce population exposure and protect public health in the San Francisco Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

The *2010 Clean Air Plan* represents the most current applicable air quality plan for the SFBAAB. Consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of air quality plans in Impact AQ-3, below.

### *Alameda County General Plan*

The countywide elements of the Alameda County General Plan contain a recently adopted Community Climate Action Plan that addresses greenhouse gas emissions within unincorporated areas of the county but otherwise does not contain any policies that address air quality within the county.

### *Alameda Watershed Management Plan*

The Alameda Watershed Management Plan identifies 40 management actions that could result in significant physical effects on air quality through an increase in construction-related air pollutant emissions. For example, the proposed project would implement Action wil13: Design and install wildlife passage structures that minimize wildlife losses, which could have significant impacts related to PM-10 (i.e., dust) emissions. The plan also identifies management actions that could be required to reduce potential physical effects. The identified management action specified for Action wil13 is Action des9, which requires implementation of a dust abatement program. Under the Alameda Watershed

Management Plan, the most important means of reducing potential air quality impacts associated with watershed construction activities is implementation of dust control best management practices (BMPs). Action des9 requires that a dust abatement program that incorporates BAAQMD-recommended BMPs be implemented as part of all construction projects. These BMPs include such measures as watering active construction areas, revegetating disturbed areas following construction, and covering stockpiles and trucks hauling soil or other loose materials. In addition, Action roal2 includes BMPs for roadway and trail construction, including minimizing grading and designing roads and trails to avoid cut-and-fill and to minimize excavation.

### *Criteria Air Pollutants*

In accordance with the CAA and CCAA, air quality standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. These air pollutants are termed criteria air pollutants because they are regulated by specific public health- and welfare-based criteria that dictate permissible levels. In general, the SFBAAB experiences low concentrations of most pollutants when compared to federal or State standards and is designated as either in attainment or unclassified<sup>36</sup> for most criteria pollutants. However, the SFBAAB is designated as non-attainment<sup>37</sup> for ozone and particulate matter.

By its very nature, regional air pollution is largely a cumulative impact, in that no single project is sufficient in size to result in non-attainment of air quality standards by itself. Instead, a project's individual emissions contribute to existing cumulative air quality impacts. If a project's contribution to cumulative air quality impacts is considerable, then the project's impact on air quality would be considered significant.<sup>38</sup>

The proposed project consists solely of construction activities and no long-term maintenance or monitoring of the site remediation would be necessary. Therefore, project implementation would not result in any long-term air quality impacts. This analysis addresses temporary construction-related air quality impacts associated with project implementation. **Table 6** identifies air quality significance thresholds. These thresholds were developed by the BAAQMD to address emissions of non-attainment pollutant within the air basin as a method to demonstrate that a project would not considerably contribute to an existing criteria air pollutant violation. Thresholds exist for ROG and NO<sub>x</sub> as they are precursor compounds to ozone.

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<sup>36</sup> Attainment status refers to those regions that are meeting federal and/or State standards for a specified criteria pollutant. Unclassified refers to regions where there is not enough data to determine the region's attainment status for a specified criteria air pollutant.

<sup>37</sup> Non-attainment refers to regions that do not meet federal and/or State standards for a specified criteria pollutant.

<sup>38</sup> Bay Area Air Quality Management District (BAAQMD), 2011. *California Environmental Quality Act Air Quality Guidelines*, May 2011, page 2-1.



Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

**TABLE 6  
CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS FOR CONSTRUCTION**

Pollutant	Average Daily Emissions (pounds/day)
Reactive Organic Gases (ROG)	54
Nitrogen Oxides (NO <sub>x</sub> )	54
PM <sub>10</sub>	82 (exhaust)
PM <sub>2.5</sub>	54 (exhaust)

SOURCE: Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report, CEQA Thresholds of Significance Air Quality Guidelines, October 2009. Available at [www.baaqmd.gov](http://www.baaqmd.gov)

The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants, which may contribute to an existing or projected air quality violation, is based on the state and federal Clean Air Act emissions limits for stationary sources established by the federal New Source Review (NSR) program. Similarly, to ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions.

The air quality analysis in Impact AQ-1 focuses primarily on the emissions of ozone and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>)<sup>39</sup> because the SFBAAB is designated as non-attainment for these pollutants. These pollutants are described below. Fugitive dust is a source of particulate matter emissions that is not emitted from an exhaust stack but, rather, generated by the disturbance of soil and is addressed separately for construction activities based on BAAQMD guidance.<sup>40</sup>

**Ozone Precursors.** As discussed previously, the SFBAAB is currently designated as non-attainment for ozone and particulate matter. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>), referred to as ozone precursors. The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants, which may contribute to an existing or projected air quality violation, are based on the State and federal Clean Air Acts emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard,

<sup>39</sup> PM<sub>10</sub> is often termed “coarse” particulate matter and is made of particulates that are 10 microns in diameter or smaller. PM<sub>2.5</sub>, termed “fine” particulate matter, is composed of particles that are 2.5 microns or less in diameter.

<sup>40</sup> BAAQMD, 2012. CEQA Air Quality Guidelines. Adopted June 2011, updated May 2012. Available at [www.baaqmd.gov](http://www.baaqmd.gov).

BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO<sub>x</sub>, the offset emissions level is an annual average of 10 tons per year (or 54 pounds [lbs.] per day).<sup>41</sup> These levels represent emissions by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

**Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>).** The federal New Source Review (NSR) program was created by the federal CAA to ensure that stationary sources of air pollution are constructed in a manner that is consistent with attainment of federal health-based ambient air quality standards. For PM<sub>10</sub> and PM<sub>2.5</sub>, the emissions limit under NSR is 15 tons per year (82 lbs. per day) and 10 tons per year (54 lbs. per day), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.<sup>42</sup> Although the regulations specified above apply to new or modified stationary sources, land use development projects result in ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions as a result of increases in vehicle trips, architectural coating, and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of land use projects and those projects that result in emissions below these thresholds would not be considered to contribute to an existing or projected air quality violation or result in a considerable net increase in ozone precursors or particulate matter. Due to the temporary nature of construction activities, only the average daily thresholds are applicable to construction phase emissions.

**Fugitive Dust.** Fugitive dust emissions are typically generated during the construction phase of a project (see Impact AQ-1). Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust.<sup>43</sup> Individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.<sup>44</sup> The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities.<sup>45</sup>

### *Local Health Risks and Hazards*

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., long-duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and death.

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<sup>41</sup> BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 17.

<sup>42</sup> Ibid., page 16.

<sup>43</sup> Western Regional Air Partnership. 2006. *WRAP Fugitive Dust Handbook*. September 7, 2006. [http://www.wrapair.org/forums/dej/fdh/content/FDHandbook\\_Rev\\_06.pdf](http://www.wrapair.org/forums/dej/fdh/content/FDHandbook_Rev_06.pdf), accessed February 16, 2012.

<sup>44</sup> BAAQMD, 2009. Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 27.

<sup>45</sup> BAAQMD, 2011. CEQA Air Quality Guidelines, May 2011.

There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but are regulated by the BAAQMD using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.<sup>46</sup>

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 70 years. Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Exposures to fine particulate matter (PM<sub>2.5</sub>) are strongly associated with mortality, respiratory diseases, and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.<sup>47</sup> In addition to PM<sub>2.5</sub>, diesel particulate matter (DPM) is also of concern. The California Air Resources Board (ARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.<sup>48</sup> The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

**Excess Cancer Risk.** As described by the BAAQMD, the United States Environmental Protection Agency (USEPA) considers a cancer risk of 100 per million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air

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<sup>46</sup> In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

<sup>47</sup> San Francisco Department of Public Health, 2008. Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review, May 2008.

<sup>48</sup> California Air Resources Board (ARB), 1998. Fact Sheet, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," October 1998.

Pollutants (NESHAP) rulemaking,<sup>49</sup> the USEPA states that it "...strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." The 100-per-1-million excess cancer cases standard is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.<sup>50</sup>

**Fine Particulate Matter.** In April 2011, the USEPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*, "Particulate Matter Policy Assessment." In this document, USEPA staff conclude that the current federal annual PM<sub>2.5</sub> standard of 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) should be revised to a level within the range of 13 to 11  $\mu\text{g}/\text{m}^3$ , with evidence strongly supporting a standard within the range of 12 to 11  $\mu\text{g}/\text{m}^3$ .

**Impact AQ-1: The project's construction activities would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. (Less than Significant)**

Construction activities are short term and typically result in emissions of ozone precursors and particulate matter in the form of dust (fugitive dust) and exhaust (e.g., vehicle tailpipe emissions). Emissions of ozone precursors and particulate matter are primarily a result of the combustion of fuel from on-road and off-road vehicles.

All project work is expected to be constructed by hand-crews and would not require the use of heavy equipment. Combustion sources of emissions associated with the project's approximately 78 working days of construction would include a small crane, portable diesel generators to power pumps and handheld construction equipment such as rock drills, saws, and pumps, as well as construction worker vehicle trips (on-road) and concrete truck trips (on-road). These activities would have a nominal potential to result in ozone (a non-attainment criteria pollutant) precursors and particulate matter emissions (both exhaust and fugitive dust), as discussed below.

#### Fugitive Dust

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 that adds particulate

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<sup>49</sup> 54 Federal Register 38044, September 14, 1989.

<sup>50</sup> BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 67.

matter to the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

All work is expected to be constructed by hand-crews and would not require the use of heavy equipment or other fugitive dust generators that could contribute particulate matter into the local atmosphere.

The project site is located in a relatively remote area. The nearest sensitive land uses are residences located approximately 1 mile to the northwest (East Bay Regional Park District residence) and 1.4 miles to the northeast (Welch Creek Road residence). Given this substantial distance and the fact that no off-road construction equipment would be used, the potential for construction dust to be a nuisance to receptors would be negligible.

As noted in Table 3, Projects Considered in the Cumulative Impact Analysis, the segment of Camp Ohlone Road between Geary Road Bridge and the ACDD, including the Little Yosemite staging areas, would be capped with 6-8 inches of gravel. This road surface treatment would reduce the amount of fugitive dust that would otherwise be expected from truck traffic along the unpaved Camp Ohlone Road. Furthermore, compliance with the management actions of the Alameda Watershed Management Plan would ensure that a dust abatement program that incorporates BAAQMD-recommended BMPs would be implemented as part of the construction project and would ensure that potential dust-related air quality impacts would be maintained at less-than-significant levels without the need for additional mitigation.

#### Criteria Air Pollutants

Combustion sources of emissions associated with the project's approximately 78 working days of construction would include a small crane, portable diesel generators to power pumps and handheld construction equipment such as rock drills, saws, and pumps, as well as construction worker vehicle trips (on-road) and concrete truck trips (on-road).

The CalEEMod computer model was used to quantify emissions from construction equipment, construction worker trips, and concrete delivery.

Table 6 identifies air quality significance thresholds for specific criteria air pollutants. Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

The estimated unmitigated daily emissions are summarized in **Table 7**. The estimates for off-road construction equipment are based on anticipated equipment and usage rates. As shown in this table, the



unmitigated daily emissions of the criteria air pollutants ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would be below the criteria pollutant thresholds listed in Table 6. Consequently, air quality impacts from construction-related criteria pollutant emissions would be less than significant.

**TABLE 7**  
**UNMITIGATED AVERAGE DAILY CONSTRUCTION-RELATED CRITERIA POLLUTANT EMISSIONS**  
**(pounds/day)**

Year	ROG	NO <sub>x</sub>	Exhaust PM <sub>10</sub>	Exhaust PM <sub>2.5</sub>
2015 Vehicle and Generator Emissions	1.5	5.7	0.4	0.4
<i>BAAQMD Construction Threshold</i>	54	54	82	54
Exceeds Threshold?	No	No	No	No

NOTES: The construction workforce was assumed to be 15 workers per day for the demolition, site preparation, utility clearance, and site restoration phases of the project, and 30 workers per day for the excavation and backfill phase.

SOURCES: California Emissions Estimator Model (CalEEMod), version 2013.2.2 prepared for the California Air Pollution Control Officers Association by ENVIRON Corporation, 2013

**Impact AQ-2: The project’s construction activities would generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)**

Construction activities do not lend themselves to analysis of long-term health risks because of their temporary and variable nature. As explained in the BAAQMD’s CEQA Air Quality Guidelines (page 8-6):

Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk.<sup>51</sup>

Therefore, project-level analyses of construction activities have a tendency to produce overestimated assessments of long-term health risks.

The project site is located over 1 mile from the nearest sensitive receptor. Although on-road heavy-duty diesel vehicles and diesel generators equipment would be used during the 78-day construction duration, emissions would be temporary and variable in nature and would not be expected to expose sensitive receptors to substantial air pollutants. Furthermore, the proposed project would be subject to, and would

<sup>51</sup> BAAQMD, 2011. *CEQA Air Quality Guidelines*, May 2011, page 8-6.

comply with, California regulations limiting truck idling to no more than 5 minutes (California Code of Regulations, Title 13, Division 3, Section 2485), which would further reduce variable DPM emissions. Therefore, construction-period TAC emissions would result in a less-than-significant air quality impact on sensitive receptors.

**Impact AQ-3: The project would not conflict with, or obstruct implementation of the 2010 Clean Air Plan. (Less than Significant)**

The most recently adopted air quality plan for the SFBAAB is the *2010 Clean Air Plan*. The *2010 Clean Air Plan* is a road map that demonstrates how the San Francisco Bay Area will achieve compliance with the State ozone standards as expeditiously as practicable and how the region will reduce the transport of ozone and ozone precursors to neighboring air basins. In determining consistency with the *2010 Clean Air Plan* (CAP), this analysis considers whether the project would (1) support the primary goals of the CAP, (2) include applicable control measures from the CAP, and (3) avoid disrupting or hindering implementation of control measures identified in the CAP.

To meet the primary goals, the CAP recommends specific control measures and actions. These control measures are grouped into various categories and include stationary and area source measures, mobile source measures, transportation control measures, land use measures, and energy and climate measures. The CAP recognizes that, to a great extent, community design dictates individual travel mode, and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and greenhouse gases from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand and people have a range of viable transportation options. To this end, the *2010 Clean Air Plan* includes 55 control measures aimed at reducing air pollution in the SFBAAB.

BAAQMD guidance<sup>52</sup> states that “if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project would be considered consistent with the 2010 CAP.” As indicated in the discussion of the previous impacts, the project would not result in significant and unavoidable air quality impacts. Consequently, based on BAAQMD guidance, the project would not interfere with implementation of the *2010 Clean Air Plan*, and because the project would be consistent with the applicable air quality plan that demonstrates how the region will improve ambient air quality and achieve the State and federal ambient air quality standards, this impact would be less than significant.

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<sup>52</sup> BAAQMD, 2012. CEQA Air Quality Guidelines. Adopted June 2011, updated May 2012, page 9-2. Available at [www.baaqmd.gov](http://www.baaqmd.gov)

**Impact AQ-4: The project would not create objectionable odors that would affect a substantial number of people. (Less than Significant)**

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities.

During project construction, diesel exhaust from generators would generate some odor, but these emissions would occur over 1 mile from the nearest sensitive land use. Further, construction-related odor would be temporary and would not persist upon project completion. The proposed project does not include the construction of any new facilities. Therefore the project would not create a significant source of new odors, and odor impacts would be less than significant.

**Impact C-AQ: The project, in combination with past, present, and reasonably foreseeable future development in the project site vicinity, would result in less-than-significant cumulative air quality impacts. (Less than Significant)**

As discussed above, regional air pollution is by its very nature largely a cumulative impact. Emissions from past, present, and future projects contribute to the region's adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts.<sup>53</sup> The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. As discussed in Impact AQ-1, the project's construction emissions would not exceed the project-level pollutant thresholds. Compliance with the management actions of the Alameda Watershed Management Plan would further ensure that the project would not result in a cumulatively considerable contribution to regional air quality impacts.

Construction-related traffic associated with the project, when combined with traffic from other sources in the Sunol Valley, would not cause Calaveras Road or Geary Road to exceed the BAAQMD's criteria for a "minor, low-impact source." Implementation of the Camp Ohlone Road Dust Control Project would reduce potential fugitive dust emissions resulting from construction vehicle traffic along Camp Ohlone Road. Residences along Calaveras Road would not be exposed to levels of TACs in excess of the BAAQMD's significance levels. The project's incremental temporary increase in localized TAC emissions resulting from project construction would be minor and would not contribute substantially to cumulative

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<sup>53</sup> BAAQMD, 2011. *CEQA Air Quality Guidelines*, May 2011, page 2-1.

TAC emissions that could affect nearby sensitive land uses. Therefore, cumulative air quality impacts would be considered less than significant.

## E.8 Greenhouse Gas Emissions

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>8. GREENHOUSE GAS EMISSIONS— Would the project:</b>					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Greenhouse gas emissions and global climate change represent cumulative impacts. Greenhouse gas emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough greenhouse gas emissions to noticeably change the global average temperature; instead, the combination of greenhouse gas emissions from past, present, and future projects have contributed and will contribute to global climate change and its associated environmental impacts.

The Bay Area Air Quality Management District (BAAQMD) has prepared guidelines and methodologies for analyzing greenhouse gases. These guidelines are consistent with CEQA Guidelines Sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's greenhouse gas emissions. CEQA Guidelines Section 15064.4 allows lead agencies to rely on a qualitative analysis to describe greenhouse gas emissions resulting from a project. CEQA Guidelines Section 15183.5 allows public agencies to analyze and mitigate greenhouse gas emissions as part of a larger plan for the reduction of greenhouse gases and describes the required contents of such a plan. Accordingly, Alameda County has prepared a *Community Climate Action Plan*<sup>54</sup> (CCAP) that presents a comprehensive assortment of greenhouse gas reduction measures for unincorporated Alameda County. The CCAP represents the County's Qualified GHG Reduction Strategy in compliance with CEQA guidelines. The actions outlined in the CCAP are expected to result in a 15-percent reduction in GHG

<sup>54</sup> Alameda County, *Community Climate Action Plan An Element of the Alameda County General Plan*, approved by the Alameda County Board of Supervisors on February, 4, 2014. The final document is available online at [http://www.co.alameda.ca.us/cda/planning/generalplans/documents/110603\\_Alameda\\_CCAP\\_Final.pdf](http://www.co.alameda.ca.us/cda/planning/generalplans/documents/110603_Alameda_CCAP_Final.pdf).

emissions in 2020 compared to 2005 levels, consistent with goals outlined in Assembly Bill 32 (also known as the Global Warming Solutions Act).<sup>55</sup> The CCAP qualifies as a greenhouse gas reduction strategy under BAAQMD guidance for greenhouse gas quantification and measure development. The CCAP will achieve a 15.6-percent reduction in greenhouse gas emissions below 2005 levels by 2020, reducing greenhouse gas emissions per service population to below 6.6 metric tons per year.<sup>56</sup>

Given that the County's local greenhouse gas reduction targets are within the State's 2020 greenhouse gas reduction targets, the County's CCAP is consistent with the goals of Assembly Bill 32. Therefore, proposed projects that are consistent with the County's CCAP would be consistent with the goals of Assembly Bill 32 and would not conflict with these plans, and would therefore not exceed the County's applicable greenhouse gas threshold of significance.

When determining whether a proposed project is consistent with the CCAP, the following should be considered:

- The extent to which the project supports or includes applicable strategies and measures, or advances the actions identified in the CCAP;
- The consistency of the project with Association of Bay Area Governments population growth projections, which are the basis of the greenhouse gas emissions inventory's projections;
- The extent to which the project would interfere with implementation of CCAP strategies, measures, or actions.

If it is determined in environmental review that a proposed project would conflict with the CCAP, the project would be required to incorporate mitigation measures, where feasible, to minimize its greenhouse gas emissions and/or environmental impact.

The following analysis of the proposed project's impact on climate change focuses on the project's contribution to cumulatively significant greenhouse gas emissions. Given that the analysis is in a cumulative context, this section does not include individual project-specific impact statements.

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<sup>55</sup> The *Clean Air Plan*, Executive Order S-3-05, and Assembly Bill 32 goals, among others, are to reduce greenhouse gases in the year 2020 to 1990 levels.

<sup>56</sup> Alameda County, *Community Climate Action Plan An Element of the Alameda County General Plan*, approved by the Alameda County Board of Supervisors on February, 4, 2014; p133.



**Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)**

Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting greenhouse gases during construction and operational phases. Direct operational emissions include greenhouse gas emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers; emissions from energy required to pump, treat, and convey water; and emissions associated with waste removal, disposal, and landfill operations.

The proposed project would have only temporary construction-related emissions and would have no long-term operational greenhouse gas emissions. Therefore, the proposed project would contribute to annual long-term increases in greenhouse gases only as a result of construction worker vehicle trips, vendor trips to bring concrete to the project site, and the operation of generators to operate pumps and power tools.

The proposed project would be subject to and required to comply with applicable County regulations adopted to reduce greenhouse gas emissions as identified in the CCAP. The regulations that are applicable to the proposed project include compliance with Section 470.4 of the County's Green Building Ordinance, which requires 75 percent of all inert waste and 50 percent of all other wastes generated by construction and demolition to be recycled or reused. Because this is the only applicable measure of the CCAP, and since the proposed project would be required to comply with it, the project would include applicable measures of the CCAP.

Additionally, the proposed project would not result in increased human population growth, the projections of which are the basis of the greenhouse gas inventory projections of the CCAP. Further, the proposed project would not interfere with implementation of strategies, measures, or actions of the CCAP. Therefore, the proposed project is determined to be consistent with the Alameda County CCAP. Consequently, the proposed project's greenhouse gas emissions would not conflict with state, regional, or local greenhouse gas reduction plans and regulations, and thus the proposed project's contribution to greenhouse gas emissions would not be cumulatively considerable or generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment. As such, the proposed project would result in a less-than-significant impact with respect to greenhouse gas emissions. No mitigation measures are necessary.

## E.9 Wind and Shadow

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>9. WIND AND SHADOW – Would the project:</b>					
a) Alter wind in a manner that substantially affects public areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Impact WS-1: The project would not alter wind in a manner that substantially affects public areas. (No Impact)**

The project site is located in the Sunol Regional Wilderness on property owned by the City and County of San Francisco that is leased to the East Bay Regional Park District (EBRPD). There are no existing buildings or structures located within the project site or its vicinity that would be altered by the project. The proposed concrete weirs, the only permanent structures to be built, would be constructed in the creek bed. While some tree trimming may be required at the three fish passage sites, no trees would be removed during project construction. For these reasons, the project would not alter wind in a manner that would substantially affect public areas.

**Impact WS-2: The project would not create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas. (No Impact)**

As described above, the project site is located in the Sunol Regional Wilderness on property owned by the City and County of San Francisco that is leased to the EBRPD. The proposed concrete weirs, the only permanent structures to be built, would be constructed in the creek bed. While some tree trimming may be required at the three fish passage sites, no trees would be removed during project construction. Therefore, the project would not create new shadow in a manner that would substantially affect outdoor recreation facilities or other public areas.

**Impact C-WS: The project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not result in significant cumulative wind or shadow impacts. (No Impact)**

Implementation of the proposed project would not contribute to cumulative impacts related to wind and shadow because the project would not cause any project-specific impacts related to this resource topic.

## E.10 Recreation

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>10. RECREATION – Would the project:</b>					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Physically degrade existing recreational resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Recreational facilities and resources in the Sunol Wilderness and project vicinity include the visitor center (located on Geary Road approximately ½ mile north of Staging Area 1), the Leyden Flats and Alameda Grove picnic sites (approximately 700 feet north of Staging Area 1), McCorkle Corral (approximately 150 feet north of the Staging Area 1), and a small picnic area with an outhouse across Camp Ohlone Road from Feature 11. Western Trail Riding Services (WTRS) offers guided horseback rides along trails within Sunol and Las Trampas Regional Wildernesses. Little Yosemite is a featured destination on 1 of WTRS’s 8 guided trail rides within the Sunol Regional Wilderness.<sup>57</sup> Camp Ohlone, a disabled persons’ camp, is located roughly 4 miles south of the project site and is open from April to October. Camp Ohlone Road is a single-lane dirt road closed to vehicular traffic but open to recreational pedestrian uses during the daytime. This road passes through the Little Yosemite area – a popular recreational destination and location of the proposed project – and provides the only access to Camp Ohlone. Camp Ohlone Road also provides access to several other hiking trails within the park and across adjacent properties. Sanctioned recreational activities in the Sunol Regional Wilderness include naturalist-led programs, nature viewing, hiking, horseback riding, picnicking, family camping, and group camping, among others. Swimming is not allowed in Alameda Creek.<sup>58</sup>

**Impact RE-1: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. (Less than Significant)**

The project would not introduce new employees, residents, or visitors to the project site vicinity who could, in turn, increase the use of existing neighborhood and regional parks or other recreational resources.

<sup>57</sup> Western Trail Riding Services. Trail Rides in Sunol Regional Wilderness. Available online at: <http://www.westerntrailriding.com/Trail-Rides--Sunol-.html>. Accessed on August 24, 2014.

<sup>58</sup> East Bay Regional Park District (EBRPD). Sunol Regional Wilderness, East Bay Regional Park District Website. Available online at: <http://www.ebparcs.org/parks/sunol>. Accessed on June 19, 2014.

However, project construction would occur over a period of 4 months and require closure of Camp Ohlone Road for a period of up to 8 days. Any such closures would be coordinated with the EBRPD, and provisions would be made to ensure property owners (e.g., Camp Ohlone) have access to properties adjacent to Camp Ohlone Road. Nevertheless, project construction activities could temporarily deter some recreationists and preclude WRTS guides from using the Camp Ohlone Trail or visiting the Little Yosemite area, and may cause them to seek alternative recreational experiences on nearby trails within the 6,589-acre Sunol Regional Wilderness or within other regional parks, such as the Ohlone Wilderness (9,737 acres), Las Trampas (5,342 acres), Mission Peak (2,999 acres), Pleasanton Ridge (5,271 acres), or Quarry Lakes (471 acres), among other parks in the area. Although the recreational experience may differ somewhat from that of the Little Yosemite area, ample alternative recreational facilities and resources exist within the Sunol Regional Wilderness and other regional parks to accommodate recreationists temporarily displaced as a result of the proposed project construction activities. Given the temporary nature of project-related disturbances on recreational facilities within the Sunol Regional Wilderness, and given the extent of alternative recreational opportunities in the vicinity, project-induced displacement of recreationists would not be expected to affect other recreational facilities and parks in the region. The project would, therefore, have a less-than-significant impact associated with increased use of existing parks or other recreational facilities to the extent that substantial physical deterioration of these facilities would occur or be accelerated.

**Impact RE-2: The project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. (No Impact)**

The project does not include new recreational facilities or include new housing development or other land uses that could, in turn, require the construction or expansion of recreational facilities. Therefore, the project would have no impact with respect to the construction or expansion of new recreational facilities that might have an adverse effect on the environment.

**Impact RE-3: The project would not physically degrade existing recreational resources. (Less than Significant)**

As the project would occur within a park, each of the elements potentially affected by the project is considered a contributing component to the overall recreational resource that is the Sunol Regional Wilderness. Physical changes to recreational resources resulting from construction of the project improvements include temporary disruption of access roads and trails, and disturbance of vegetation, creek hydrology and geomorphology, and water quality that contribute to the recreational setting of the area. More specifically, for example, transport and staging of construction equipment along and adjacent to Camp Ohlone Road would disrupt the road/trail surface and vegetation within staging areas adjacent to the

road/trail. Construction and placement of temporary wood ramp/stair systems and work platforms, and associated increased foot and equipment traffic, would disturb hiking trails and adjacent vegetation between Camp Ohlone Road and the Alameda Creek channel. Construction of the fish passage improvements within the Alameda Creek channel (e.g., installation of water diversion structures, dewatering, rock removal, and weir installation) would affect creek vegetation, hydrology, geomorphology, and water quality.

As discussed below in Section E.15, Hydrology and Water Quality, the SFPUC would require the construction contractor to implement standard construction measures and standard best management practices (BMPs) for erosion and sediment control during construction, which would reduce the potential for some construction-period ground disturbance impacts. In addition, as described in Section A, Project Description, upon completion of construction all construction equipment, including the temporary ramp/stair system and work platforms, would be removed and the work areas would be restored to their approximate pre-construction condition. As a result, the above-noted impacts on Camp Ohlone Road, access trails to Alameda Creek, park vegetation, and Alameda Creek water quality would be temporary.

Installation of the fish passage improvements would permanently alter the hydrology and geomorphology of the Alameda Creek channel, which as noted above is considered a contributing component to the overall recreational resource. These alterations would result in reduced water surface drops, creation of new pools, and deepening of existing pools. These changes would be limited to areas in the immediate vicinities of Features 9, 10, and 11 and would not be expected to affect the creek's overall hydrology or geomorphology. Following construction, the fish passage improvement structures would require periodic inspection and maintenance, similar to that performed for other park facilities in the area. No substantial physical changes to recreational resources would be expected in association with these permanent alterations or periodic maintenance activities.

Project construction and operation would result in localized temporary and permanent changes to features that contribute to the Sunol Regional Wilderness recreational resource. As described above, most impacts would be temporary, followed by restoration of disturbed areas to their approximate pre-construction conditions. Permanent physical changes to the Alameda Creek channel would be isolated and would not be expected to affect overall creek conditions within the park or beyond, with the exception of improved conditions for fish migration. For the above-described reasons, project construction and operations would not be expected to degrade the Sunol Regional Wilderness or any individual element that contributes to that recreational resource. As a result, project implementation would be expected to have a less-than-significant impact with respect to degradation of a recreational resource.



**Impact C-RE: The project, in combination with past, present, and reasonably foreseeable future projects, would not result in cumulative impacts related to degradation of existing recreational resources. (Less than Significant)**

The geographic scope for cumulative impacts on recreational resources consists of the project site and immediate vicinity.

As discussed in Impact RE-1, the project could temporarily displace recreational users of Camp Ohlone Road and the Little Yosemite area. In addition, as discussed in Impact RE-3, the project would temporarily and permanently alter certain elements (e.g., trails, vegetation, water quality, hydrology) of the Sunol Regional Wilderness. Of the cumulative projects listed in Table 3, Project 2, Camp Ohlone Road Dust Control Project is the only reasonably foreseeable project that would overlap geographically with the proposed Little Yosemite Fish Passage Project. However, Project 3, the Alameda Creek Diversion Dam (ACDD), would have a construction schedule and recreational resources impacts that could overlap with those anticipated for the proposed project. The Camp Ohlone Road Dust Control Project is expected to be completed prior to commencement of the Little Yosemite Project. The ACDD project is expected to be implemented concurrently with the proposed project, with construction occurring between March 2016 and March 2017.

As with the Little Yosemite Fish Passage Project, the Camp Ohlone Road and ACDD project work may also cause some recreationists to seek alternative recreational experiences within other areas of the Sunol Regional Wilderness or other regional parks. The former would require intermittent closures of Camp Ohlone Road during weekday work hours for a period of up to 3 months. The ACDD project would use Camp Ohlone Road for the transport of construction equipment, and would involve substantial work within Alameda Creek. The ACDD project site is located approximately 2.6 miles upstream of the Little Yosemite project site. ACDD project construction would also require temporary closures of Camp Ohlone Road during weekday work hours for a period of up to 12 months. For both projects, provisions would be made for passage of residents/leases and emergency vehicles during weekday work hours. Camp Ohlone Road would be open during evening hours and weekends.

The combined effects of these projects on recreational resources would be minimal, limited in extent of geographic overlap, and mostly temporary. The number of recreationists displaced as a result of these projects would likely be small relative to the capacity of other recreational facilities within the Sunol Regional Wilderness and other regional parks. Impacts on recreational features (trails, vegetation, water quality) would cease and be restored to pre-construction condition following project implementation. For the reasons set forth above, the project, in combination with the Camp Ohlone Road and ACDD improvements, would not result in cumulative impacts related to degradation of existing recreational resources. Therefore, cumulative impacts related to degradation of recreational resources would be less than significant.

## E.11 Utilities and Service Systems

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>11. UTILITIES AND SERVICE SYSTEMS – Would the project:</b>					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project would not require long-term use of potable water and would not generate substantial amounts of wastewater. Water for use during construction would be trucked to the site or delivered by temporary pipe, which would be removed upon completion of construction and site restoration. Portable toilet facilities would be provided during construction, and only limited amounts of water would be removed from the work areas during construction. Therefore, Topics 11(a), 11(b), 11(d), and 11(e) are not applicable.

**Impact UT-1: The proposed project would not require new stormwater drainage facilities or the expansion of existing facilities, the construction of which could result in significant environmental effects. (No Impact)**

Project construction activities would temporarily disturb areas within and adjacent to Alameda Creek that would be subject to stormwater runoff during a storm event. Project construction would occur over a 4-month period during the summer months when storm events are infrequent and creek flows are minimal. As discussed in Section E.15, Hydrology and Water Quality, standard best management practices (BMPs) would be implemented during construction to manage stormwater runoff as part of the

Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the project (refer also to Section A.6, Project Description, Project Approvals). Implementation of these BMPs would further reduce the potential for stormwater runoff impacts. The project proposes no permanent modifications (e.g., new impervious surfaces) to upland areas that would affect stormwater drainage. All proposed permanent improvements would occur within the creek channel and therefore would not require stormwater drainage facilities. As a result, the project would have no impact with respect to requiring new or expanding existing drainage facilities.

**Impact UT-2: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and would comply with federal, state, and local statutes related to solid waste. (Less than Significant)**

The project would result in adverse effects related to landfill capacity and compliance with federal, state, and local statutes related to solid waste if the volume of wastes produced would exceed the regional landfill capacity or waste disposal would not comply with existing statutes. However, as discussed in Section A, Project Description, only limited amounts of rock would be removed for anchoring the concrete weirs as well as for deepening existing pools and improving fish passage hydraulics. Rocks that are broken during these activities would remain within the active stream channel, and no other excavation or cutting wastes would be generated. Although there could be limited construction wastes produced such as emptied concrete bags, empty containers, wrapping from construction materials, and construction worker wastes, the amount of wastes would be limited and would not exceed the capacity of regional landfills. In addition, the construction contractor would be required to comply with the Alameda County goal of diverting 75 percent of wastes from landfills,<sup>59</sup> which exceeds the State of California goal of 50-percent waste diversion specified in Assembly Bill 939. Therefore, impacts related to landfill capacity and compliance with federal, state, and local statutes related to solid waste would be less than significant during construction.

The project would not be expected to generate operational wastes. However, small amounts of waste materials (i.e., concrete and rebar) could be generated as a result of periodic repair and maintenance activities. Any such wastes would be removed from the creek channel and placed in an approved landfill. Due to the small quantities of any such wastes, no appreciable effect on area landfill capacity or conflict with any applicable statutes or regulations related to solid waste generation would be expected. As such, the project's operational impacts regarding solid waste would be less than significant.

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<sup>59</sup> County of Alameda, Resolution No. 2008-13, Resolution Establishing a Goal of 75 Percent Reduction in Waste Going to Landfills by 2010 for Unincorporated Areas and Civic Operations in the County of Alameda.

**Impact C-UT: The project, in combination with past, present, and reasonably foreseeable future projects, would not result in cumulative impacts related to exceeding landfill capacity and would comply with federal, state, and local statutes related to solid waste. (Less than Significant)**

The geographic scope of the cumulative impacts analysis for utilities and service systems consists of the Sunol Valley. The proposed project and all of the projects listed in Table 3 would generate wastes that require offsite disposal. However, the proposed project and all of the potential cumulative projects would divert construction waste away from landfills, as mandated by Assembly Bill 939 and as implemented by the Alameda County waste management ordinance, which would require that approximately 75 percent of construction waste be diverted. While the amount of waste generated by these projects may still be substantial, the proposed project’s contribution of such waste would be relatively minimal and not cumulatively considerable. Therefore, the potential cumulative impact related to exceeding landfill capacity and compliance with solid waste statutes and regulations would be less than significant.

## E.12 Public Services

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>12. PUBLIC SERVICES— Would the project:</b>					
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Impact PS-1: The project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities. (No Impact)**

As described in previous sections, the project site is located in the Sunol Regional Wilderness on property owned by the City and County of San Francisco that is leased to the EBRPD. The Alameda Watershed Management Plan provides a policy framework for the SFPUC to make management decisions about activities, practices, and procedures that are appropriate on SFPUC lands in the Alameda Creek watershed. With respect to public services, the Alameda Watershed Management Plan outlines requirements related to fire protection services, including procedures that contractors must adhere to during construction activities.

During the proposed 4-month construction period, up to 20 construction workers would be employed at the project site, depending on the phase of construction. Construction workers are expected to come from

the Bay Area. While it is possible that some workers might temporarily relocate from other areas, the project would not result in a substantial increase in the local population.

Potential incidents requiring law enforcement, fire protection, or emergency services could occur during construction; however, any temporary increase in incidents would not exceed the capacity of local law enforcement, fire protection, and emergency facilities such that new or expanded facilities would be required. This is because any temporary increase in the local population during project construction would be negligible and could be accommodated by existing service providers.

In addition, project implementation would not permanently increase the local population. Long-term activities associated with the project would be limited to periodic inspections and repair over the 20- to 30-year lifespan of the concrete weirs and would not result in substantial increases in the demand for public services, including fire protection, police protection, libraries, schools, hospitals, or other services. Therefore, the project would have no impact on public services.

**Impact C-PS: The project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not result in significant cumulative public services impacts. (No Impact)**

Implementation of the project would not contribute to any cumulative impacts related to public services because the project would not result in any project-specific impacts related to this topic.

### E.13 Biological Resources

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>13. BIOLOGICAL RESOURCES –</b> <b>Would the project:</b>					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>13. BIOLOGICAL RESOURCES –</b>					
<b>Would the project:</b>					
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### *Approach to Analysis*

To analyze the impacts of the project, ESA (1) reviewed available biological resource surveys of the project site and relevant surrounding vicinity as the overall study area for this analysis; (2) reviewed special-status species lists for this study area derived from the California Natural Diversity Database (CNDDDB), the US Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW),<sup>60</sup> and the California Native Plant Society (CNPS); and, (3) performed a field reconnaissance of the project site to record current site conditions.

### Previous Biological Resource Surveys

Within the study area, certain areas in the relevant vicinity of the project site have been previously surveyed for biological resources, including special-status wildlife and flora, waters of the United States and of the state, and other sensitive natural communities. A CDFG protocol-level<sup>61</sup> special-status plant survey for big tarweed (*Blepharizonia plumosa*) was performed on September 14, 2014 in support of this project analysis. No focused special-status wildlife surveys were performed for this project analysis.

The following documents were reviewed and are referenced to support the analysis of potential environmental impacts of the project:

<sup>60</sup> The California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW) on January 1, 2013. In this document, references to literature published by CDFW before January 1, 2013, are cited as “CDFG, [year].” The agency is otherwise referred to by its new name, CDFW.

<sup>61</sup> CDFG, 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Biogeographic Data Branch, Sacramento. Data dated November 24, 2009.



- *Habitat Assessment for Little Yosemite Fish Passage Project*<sup>62</sup>
- *Little Yosemite Fish Passage Project Preliminary Delineation of Waters of the United States*<sup>63</sup>
- *Pre-construction Special-Status Plant Survey Results for the Little Yosemite Fish Passage Project*<sup>64</sup>
- *Calaveras Dam Replacement Project Final Environmental Impact Report*<sup>65</sup>
- *Biological Assessment for the Geary Road Bridge Replacement Project*<sup>66</sup>
- *Geary Road Replacement Project Final Mitigated Negative Declaration*<sup>67</sup>
- *Final Botanical Survey Report for the SFPUC Geary Road Bridge Project*<sup>68</sup>
- *Alameda Creek Aquatic Resource Monitoring Report 2007*<sup>69</sup>
- *Fish Passage at the Little Yosemite Reach of Alameda Creek*<sup>70</sup>
- *Biological Opinion for the Calaveras Dam Replacement Project in Alameda and Santa Clara Counties*<sup>71</sup>

The findings of these previous biological resources analyses were used to compile the list of special-status species that may occur at the project site (see **Appendix A**).

### Special-Status Species Lists

Special-status species lists were derived from the CNDDDB, USFWS, CDFW, and CNPS database searches of La Costa Valley, Niles, Mendenhall Springs, Milpitas, Calaveras Reservoir, Mt. Day, Dublin, Livermore, and Altamont U.S. Geological Survey 7.5-minute quadrangles in addition to database searches of Alameda and Santa Clara counties. The primary sources of data referenced for this study were as follows:

- USFWS, Online Inventory of Federally Threatened and Endangered Species<sup>72</sup>

<sup>62</sup> BioMaAS, 2014. *Habitat Assessment for Little Yosemite Fish Passage Project*, Alameda Creek, Sunol Valley, Alameda County, CA. Prepared for the San Francisco Public Utilities Commission.

<sup>63</sup> ESA, 2014a. *Little Yosemite Fish Passage Project Preliminary Delineation of Waters of the United States*, Alameda County, CA. Prepared for the San Francisco Public Utilities Commission.

<sup>64</sup> ESA, 2014b. *Pre-construction Special-Status Plant Survey Results for the Little Yosemite Fish Passage Project*, Alameda County, CA. Prepared for the San Francisco Public Utilities Commission.

<sup>65</sup> City of San Francisco Planning Department, 2011. *Calaveras Dam Replacement Project Final Environmental Impacts Report*.

<sup>66</sup> ICF International, 2012. *Biological Assessment for the Geary Road Bridge Replacement Project*. Submitted to the U.S. Army Corps of Engineers, San Francisco CA.

<sup>67</sup> City of San Francisco Planning Department, 2013. *Geary Road Bridge Replacement Project Final Mitigated Negative Declaration*.

<sup>68</sup> ICF International, 2011. *Final Botanical Survey Report for the SFPUC Geary Road Bridge Project*. Prepared for the San Francisco Planning Department and the San Francisco Public Utilities Commission.

<sup>69</sup> SFPUC 2009. *Alameda Creek Aquatic Resource Monitoring Report 2007*, Prepared by the San Francisco Public Utilities Commission Water Enterprise, Natural Resources and Lands Management Division, Fish and Wildlife Section. Sunol, CA

<sup>70</sup> URS, Michael Love & Associates, and HDR, 2013. *Conceptual Engineering Report – Fish Passage at the Little Yosemite Reach of Alameda Creek*, prepared for San Francisco Public Utilities Commission, July 2013 (updated August 2013).

<sup>71</sup> National Marine Fisheries Service (NMFS). 2011. *Biological Opinion for the Calaveras Dam Replacement Project in Alameda and Santa Clara Counties*, (Corps File No. 299790S), NMFS Tracking number 2005/07436, 5 March 2011.

<sup>72</sup> US Fish and Wildlife Service (USFWS), 2014. *Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in the La Costa Valley, Niles, Mendenhall Springs, Milpitas, Calaveras Reservoir, Mt. Day, Dublin, Livermore, and Altamont U.S. Geological Survey 7.5-minute Quadrangles*. USFWS Endangered Species Division. [http://www.fws.gov/sacramento/ES\\_Species/Lists/es\\_species\\_lists-form.cfm](http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm). Data dated June 4, 2013.

- CNPS, Online Inventory of Rare and Endangered Plants<sup>73</sup>
- CNDDDB, Rarefind 5 computer program<sup>74</sup>
- Threatened and Endangered Plants List<sup>75</sup>
- Threatened and Endangered Animals List<sup>76</sup>

The findings of these database searches and species lists were used to compile the list of special-status species that may occur at the project site (**Appendix A**).

### Reconnaissance Survey

Biological resources within the project site were verified by an ESA biologist during a field reconnaissance conducted on April 25, 2014. Prior to the reconnaissance survey, databases were reviewed for the project site and surrounding area. The field reconnaissance consisted of a pedestrian survey within each project site boundary (Features 9, 10, 11, and associated staging areas and access roads) and observations of the adjacent environments. The field surveys were focused on identifying habitat for special-status plant and wildlife species. General habitat conditions were noted and incidental species observations were recorded. The findings of the reconnaissance survey, the literature review, and the database queries were used to compile the list of special-status species that may occur at the project site (Appendix A) and to characterize the local project setting, described below.

### *Environmental Setting*

#### Regional Setting

The project site is located approximately 7.5 miles southeast of the town of Sunol and is within the Sunol Valley in unincorporated Alameda County. The project site is situated on a reach of Alameda Creek known as Little Yosemite, in the 128,640-acre southern Alameda Creek watershed and within the Diablo Range. The Diablo Range separates the Bay Area from the interior San Joaquin Valley and most of the mountain range is remote, with few roads, utilities, or other urban facilities and services.<sup>77</sup> The SFPUC currently leases 3,812 acres to the East Bay Regional Park District (EBRPD) as part of the 6,858-acre Sunol Regional Wilderness, which abuts Alameda Creek and is managed by the EBRPD.

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<sup>73</sup> California Native Plant Society (CNPS), 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, California. <http://www.cnps.org/cnps/rareplants/inventory>. Accessed June 4, 2014.

<sup>74</sup> CDFW, 2014. California Natural Diversity Database Rarefind 5. Biogeographic Data Branch, Sacramento. Data dated June 4, 2014.

<sup>75</sup> CDFW, 2013a. State and Federally Listed Endangered, Threatened, and Rare Plants of California. Biogeographic Data Branch, Sacramento. Data dated July 2013.

<sup>76</sup> CDFW, 2013b. State and Federally Listed Endangered & Threatened Animals of California. Biogeographic Data Branch, Sacramento. Data dated October 2013.

<sup>77</sup> City of San Francisco Planning Department, 2011. *Calaveras Dam Replacement Project Final Environmental Impacts Report*.

Alameda Creek drains a large area of the Coast Range east of South San Francisco Bay immediately north of Mt. Hamilton and flows generally to the northwest where it joins Arroyo de la Laguna south of Sunol. From this location, Alameda Creek then flows westerly through Niles Canyon and then into Lower Alameda Creek through the communities of Niles, Fremont, and Union City before flowing into South San Francisco Bay. Land use around Alameda Creek upstream and in the vicinity of the project site is mostly grazing land and recreational open space. The Alameda Creek Diversion Dam (ACDD) is located upstream from the project site and is used to divert Alameda Creek flows via a tunnel into Calaveras Reservoir for storage and use as drinking water supply. Little Yosemite is a 0.4-mile-long, steep gradient reach of Alameda Creek located immediately upstream of the confluence with Calaveras Creek and about 2.6 miles downstream of the ACDD.

Existing land uses in the Sunol area include nurseries, golf courses, the Sunol Water Temple and SFPUC maintenance yard, the Sunol Valley Water Treatment Plant, grazing lands leased to the EBRPD, recreational trails, and quarry/mining.<sup>78</sup> Habitat within and adjacent to the project site has a history of livestock grazing and except for recreational trail use, is relatively undisturbed.

#### Local Project Setting

The Alameda Creek basin is an interior Coast Range drainage originating on the northwestern slopes of the Diablo Range and draining toward San Francisco Bay with two main branches, Arroyo de la Laguna and Alameda Creek, forming watersheds that join at the western end of Sunol Valley.<sup>79</sup> Alameda Creek can be divided into three distinct reaches: lower Alameda Creek, Niles Canyon, and upper Alameda Creek. The project site is located in Reach A-3 of upper Alameda Creek as defined for the Calaveras Dam Replacement Project (CDRP) FEIR.<sup>80</sup> In the Little Yosemite area of Alameda Creek, the channel becomes very steep (approximately 15 percent gradient) and is well confined with little or no floodplain. The substrate is dominated by boulders and bedrock. The riparian vegetation is relatively dense and the surrounding canyon walls are steep. The numerous cascades, bedrock chutes, and waterfalls in this section likely form a natural barrier to upstream migration of several of the native fish species and all of the introduced species. Passage through Little Yosemite is problematic at three sites identified as Features 9, 10, and 11. The project would construct concrete weirs shaped like natural boulders or bedrock. The weirs would reduce water surface drops, create new pools and deepen existing pools for

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<sup>78</sup> Ibid.

<sup>79</sup> EDAW. 2009. *Technical Memorandum: Calaveras Dam Replacement Project: Future Cumulative Impacts Analysis – Central California Coast Steelhead*. Date: September 25, 2009

<sup>80</sup> San Francisco Public Utilities Commission, 2011, Calaveras Dam Replacement Project, Final Environmental Impact Report, Volume 1, City and County of San Francisco, San Francisco Planning Department.

leaping.<sup>81</sup> The Alameda Creek Diversion Dam, approximately 2.6 miles upstream of the project site, diverts water from Alameda Creek for storage in Calaveras Reservoir.

In the historical unimpaired (pre-dam) conditions and as observed under the existing condition, there is a small amount of streamflow (usually less than 1 cubic foot per second) through Little Yosemite during the dry season. Winter and spring diversions from Alameda Creek to Calaveras Reservoir at the ACDD have been substantially reduced since 2002 because of the California Department of Water Resources Division of Safety of Dams (DSOD) limitations on storage in Calaveras Reservoir.

#### *Fish Species*

Alameda Creek supports both warmwater and coldwater fish species. Coldwater species historically included a run of anadromous steelhead, but today is comprised of non-migratory rainbow trout (*Oncorhynchus mykiss*) that are mostly confined to headwater streams that maintain year round cool-water flows (upper Alameda, Calaveras, and San Antonio Creeks) or the coldwater pools within San Antonio and Calaveras Reservoirs. Warmwater species, including native Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento sucker (*Catostomus occidentalis*), prickly sculpin (*Cottus asper*), California roach (*Lavinia symmetricus*), and Pacific lamprey (*Entosphenus tridentata*), inhabit the lower gradient channels in Alameda Creek from about the confluence with Calaveras Creek downstream. There is some overlap between the warmwater and coldwater species in sections of Alameda Creek within Sunol Regional Wilderness and in the project vicinity where both rainbow trout and California roach are found.<sup>82</sup>

#### *Vegetation Communities and Habitat Types*

**Oak Woodland.** Oak woodland occurs in the project vicinity – within or surrounding areas that might be impacted by project activities – upslope of the riparian corridor of Alameda Creek, on the edges of the Staging Area 1 and overhanging Staging Areas 2 and 3. The dominant species is coast live oak (*Quercus agrifolia*) with valley oak (*Quercus lobata*) as a subdominant. The shrub layer is sparse to moderate and includes poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and sticky monkey flower (*Mimulus aurantiacus*). The herbaceous layer contains a mixture of natives and exotics including wild oat (*Avena barbata*), Torrey's onion grass (*Melica torreyana*), climbing bedstraw (*Galium porrigens*), yarrow (*Achillea millefolium*), field hedge parsley (*Torilis arvensis*), and filaree (*Erodium botrys* and *E. cicutarium*).

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<sup>81</sup> URS, Michael Love & Associates, and HDR, 2013. Conceptual Engineering Report – Fish Passage at the Little Yosemite Reach of Alameda Creek, prepared for San Francisco Public Utilities Commission, July 2013 (updated August 2013).

<sup>82</sup> San Francisco Public Utilities Commission (SFPUC), 2009. Alameda Creek Aquatic Resource Monitoring Report 2007, Prepared by the SFPUC Water Enterprise, Natural Resources and Lands Management Division, Fish and Wildlife Section. Sunol, CA

Wildlife species common to oak woodland include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridis*), gopher snake (*Pituophis catenifer*), wild turkey (*Meleagris gallopavo*), acorn woodpecker (*Melanerpes formicivorus*), tree swallow (*Tachycineta bicolor*), oak titmouse (*Baeolopus inoratus*), western bluebird (*Sialia mexicana*), western gray squirrel (*Sciurus griseus*), and black-tailed deer (*Odocoileus hemionus*). Several bat species are also known to roost in oak woodland.

**California Sagebrush Shrubland.** This community occurs on the slopes of Alameda Creek, along Camp Ohlone Road, within the footprint of the temporary access to Features 9, 10, and 11, and within Staging Areas 2 and 3. The community is dominated by California sagebrush; other shrub species include poison oak, coyote brush, sticky monkeyflower, and yerba santa (*Eriodictyon californicum*). The herbaceous understory within the canopy openings primarily consists of exotic annuals such as prickly lettuce (*Lactuca serriola*), scarlet pimpernel (*Anagallis arvensis*), hedgehog dogtail (*Cynosurus echinatus*), false brome (*Brachypodium distachyon*), rye grass (*Festuca perennis*), annual yellow sweet clover (*Melilotus indica*), filarees, Napa star thistle (*Centaurea melitensis*), and yellow star-thistle (*Centaurea solstitialis*). Native components of the understory include purple needle grass (*Stipa pulchra*), yarrow, and chick lupine (*Lupinus microcarpus*). Wildlife species found using this alliance are similar in make-up to the Coast live oak woodland alliance, but such shrub habitat provides important cover for terrestrial and avian species to forage and nest within; these species include fox sparrow (*Passerella iliaca*), California quail (*Callipepla californica*), and California towhee (*Melospiza crissalis*).

**California Sycamore.** The riparian corridor of Alameda Creek, with a high cover of large boulders and very steep banks, contains mature trees and some saplings, but the understory within the creek channel is sparse, with very little vegetation in the shrub and herb layers. The diverse tree canopy contains California sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia*), bay laurel (*Umbellularia californica*), willow (*Salix* sp.), big leaf maple (*Acer macrophyllum*), coast live oak, and valley oak. The riparian tree canopy, due to its diversity and near codominance of California sycamore and white alder, is transitional between the two riparian alliances. However, due to the dominance of California sycamore within the creek corridor surrounding Features 9, 10, and 11, the community is best characterized by the California sycamore alliance. The steep, shaded creek banks above the creek channel support more diversity in the understory, containing mugwort (*Artemisia douglasiana*), purple needle grass, maidenhair fern (*Adiantum jordanii*), goldback fern (*Pentagramma triangularis*), bedstraw (*Galium aparine*), and hedgehog dogtail. Black phoebe (*Sayornis nigricans*), Cooper's hawk (*Accipiter cooperii*), warbling vireo (*Vireo gilvus*), Bewick's wren (*Thryomanes bewickii*), and orange-crowned warbler (*Oreothlypis celata*) are common to such a riparian community. Common and special-status bats may also roost in tree cavities or beneath the bark of the sycamores.

**Non-Native Grassland.** The non-native grassland community is located at Staging Area 1 and is dominated by non-native filarees, soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), cheatgrass (*Bromus*

*tectorum*), wild oat, rose clover (*Trifolium hirtum*), field hedge parsley, hairy vetch (*Vicia villosa*), prostrate knotweed (*Polygonum aviculare*), and Italian thistle (*Carduus pycnocephalus*). Several natives, including chick lupine, common fiddleneck (*Amsinkia menziesii*), purple needle grass, and soap plant (*Chlorogalum pomeridianum*), are found throughout at low cover.

This vegetation community can provide cover, foraging, and nesting habitat for a variety of bird species as well as reptiles and small mammals. Reptiles inhabiting this community may include western fence lizard and gopher snake. Birds commonly found in such areas include American robin (*Turdus migratorius*), house finch (*Haemorrhous mexicanus*), and western scrub jay (*Aphelocoma californica*). Within the project site, this community also provides foraging and nesting habitat for California horned lark (*Eremophila alpestris actia*), a species included on the CDFW Watch List, and loggerhead shrike (*Lanius ludovicianus*), a California Species of Special Concern. Mammals common to annual grasslands include California ground squirrel (*Otospermophilus beecheyi*), black-tailed jack rabbit (*Lepus californicus*), and Botta's pocket gopher (*Thomomys bottae*).

#### *Wetlands and Other Waters*

**Wetland Definitions.** Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The federal government defines and regulates wetlands and other waters in Section 404 of the Clean Water Act as “areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3[b] and 40 CFR 230.3).

Under normal circumstances, the federal definition of wetlands requires the presence of three identification parameters: wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to other waters of the United States. Other waters of the U.S. include unvegetated waters of streams, lakes, and ponds.

The Porter-Cologne Water Quality Control Act (Section 13260 of the California Water Code) requires “any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements).” Under the Porter-Cologne Water Quality Control Act definition, the term “waters of the state” is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Although all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—in California, waters of the United States represent a subset of waters of the state. Therefore, the State of California through each of nine Regional Water Quality Control Boards retains authority to regulate discharges of waste into any waters of the state, regardless of whether United States Army Corps of Engineers (Corps) has concurrent jurisdiction under Clean Water Act Section 404.



**Perennial Stream (Alameda Creek).** Alameda Creek flows directly into San Francisco Bay, a traditional navigable waterway and under the jurisdiction of the Corps. Therefore, the section of Alameda Creek within which the fish passage improvements would be constructed is a water of the United States. In addition, the bed, bank, and extent of the riparian corridor of Alameda Creek are under the jurisdiction of the CDFW. ESA biologists conducted the delineation of waters of the U.S. within the project study area on June 19, 2014, and documented the characteristics and extent of all potentially jurisdictional wetlands and other waters of the U.S. The delineation revealed a total of 0.84 acre (575 linear feet) of potentially jurisdictional riverine “other waters” (including instream wetlands) and 116 linear feet of potential jurisdictional ephemeral drainage “other waters” occur within the project study area.<sup>83</sup>

### *Regulatory Framework*

#### *Wetland Regulations*

This section describes the regulatory background applicable to wetlands and waters of the United States or the state.

#### *Rivers and Harbors Act*

The objective of the Rivers and Harbors Act of 1899 is to prevent interferences with navigation, by barring unpermitted discharges of refuse into navigable waters.

**Section 10** of the Rivers and Harbors Act appoints the Corps to regulate the construction of structures in, over, or under, excavation of material from, or deposition of material into “navigable waters.” In tidal areas, the limit of navigable water is the mean high tide line; in non-tidal waters it is the ordinary high water mark (OHWM). Larger streams, rivers, lakes, bays, and oceans are examples of navigable waters regulated under Section 10 of the Rivers and Harbors Act.

#### *Federal Clean Water Act*

The objective of the Clean Water Act (33 U.S.C. §§ 1251 et seq) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

**Section 404** of the Clean Water Act regulates activities that involve a discharge of dredged or fill material into waters of the United States. The Corps is responsible for issuing permits for discharges covered by Section 404, including most notably the filling of wetlands. The Corps emphasizes avoiding and minimizing impacts on wetlands where feasible. When impacts on wetlands cannot be avoided, compensatory

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<sup>83</sup> ESA, 2014. Little Yosemite Fish Passage Project *Preliminary Delineation of Waters of the United States*, Alameda County, CA. Prepared for the San Francisco Public Utilities Commission.

mitigation is generally required as part of the Section 404 permit process to ensure that there is no net loss of wetlands values and functions.

**Section 401** of the Clean Water Act is administered by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards. Under Section 401, an applicant for a federal permit, such as a Section 404 permit to discharge dredged or fill material into waters of the United States, must obtain a “water quality certification” from the appropriate state agency stating that the permitted activity is consistent with the state’s water quality standards. The San Francisco Bay Regional Water Quality Control Board (RWQCB) is the appointed authority for Section 401 compliance in the Bay Area.

The Clean Water Act defines wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands under the Clean Water Act must therefore meet a three-parameter test, which includes the presence of wetland hydrology, hydrophytic vegetation, and hydric soils.

### Special-Status Species Regulations

This section describes the regulatory background applicable to special-status species. The section that follows describes special-status species that may occur on the project site.

#### *Federal Endangered Species Act*

The federal Endangered Species Act (ESA) protects the fish and wildlife species and their habitats that the USFWS or National Marine Fisheries Service (NMFS) has identified as threatened or endangered. The term “endangered” refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their range. The term “threatened” refers to species, subspecies, or distinct population segments that are likely to become endangered in the near future.

The USFWS and NMFS administer the ESA. In general, the NMFS is responsible for protecting ESA-listed marine species and anadromous fishes (those that live in the sea but migrate upstream to spawn); listed, proposed, and candidate wildlife, plant species, and freshwater fish species are under USFWS jurisdiction. “Take”<sup>84</sup> of listed species can be authorized through either the Section 7<sup>85</sup> consultation

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<sup>84</sup> The ESA defines the term “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

<sup>85</sup> Under Section 7, the federal lead agency must consult with the USFWS to ensure that the proposed action would not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a project “may affect” a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the expected effect. The USFWS then issues a biological opinion determining whether (1) the proposed action may either jeopardize the continued existence of one or more listed species or result in the destruction or adverse modification of critical habitat, or (2) the proposed action would not jeopardize the continued existence of any listed species or result in adverse modification of critical habitat.

process (for actions by federal agencies) or the Section 10 permit process (for actions by non-federal agencies). Federal agency actions include activities on federal land or that are conducted by, funded by, or authorized by a federal agency (including issuance of federal permits and licenses).

Under the ESA, the Secretary of the Interior (or the Secretary of Commerce, as appropriate) formally designates critical habitat for certain federally listed species and publishes these designations in the Federal Register. Critical habitat is defined as the specific areas that are essential to the conservation of a federally listed species and that may require special management consideration or protection.

#### *Federal Migratory Bird Treaty Act*

The federal Migratory Bird Treaty Act (MBTA; United States Code, Title 16, Section 703, Supplement I, 1989) prohibits taking, killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. The ESA defines take as "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species." Harm may include significant habitat modification where it actually kills or injures a listed species through impairment of essential behavior (e.g., nesting or reproduction). Therefore, for projects that would not result in the direct mortality of birds, the MBTA is generally also interpreted in CEQA analyses as protecting active nests of all species of birds that are on the List of Migratory Birds, published in the Federal Register in 1995. With respect to nesting birds, while the MBTA itself does not provide specific take avoidance measures, the USFWS and CDFW over time have developed a set of measures sufficient to demonstrate take avoidance. Since these measures are typically required as permitting conditions by these agencies, they are often incorporated as mitigation measures for projects during the environmental review process. These requirements include avoiding tree removal during nesting season, conducting pre-construction nesting bird surveys, and establishing appropriate buffers from construction if active nests are found.

#### *California Endangered Species Act*

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code, Section 2070). The CDFW also maintains a list of candidate species," which are those formally under review for addition to either the list of endangered species or the list of threatened species. In addition, the CDFW maintains a list of "species of special concern," which serves as a watch list.

The CESA prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened or endangered in California. "Take" in the context of the CESA means to hunt, pursue, kill, or capture a listed species, as well as any other actions that may result in adverse impacts when a person is attempting to take individuals of a listed species. The take prohibitions also

apply to candidates for listing under the CESA. However, Section 2081 of the CESA allows the CDFW to authorize exceptions to the State's take prohibition for educational, scientific, or management purposes.

In accordance with the requirements of the CESA, an agency reviewing a project within its jurisdiction must determine if any State-listed endangered or threatened species could be present in the project area. The agency also must determine if the project could have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any project that could affect a candidate species.

#### *California Fish and Game Code*

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation under it. Section 3503.5 prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) allow the designation of a species as fully protected. This is a greater level of protection than that afforded by the CESA. Except for take related to scientific research, all take of fully protected species is prohibited.

**Section 1602.** Notification of the CDFW is required whenever any work is undertaken in or near a river, stream, or lake that flows at least intermittently through a defined bed or channel, and may even apply when work is performed on a floodplain. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will substantially divert or obstruct the natural flow of any river, stream, or lake; substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

**Sections 5900–6100.** These sections of the California Fish and Game Code pertain to dams, conduits, and screens and other unnatural impediments to fish passage. The Little Yosemite Fish Passage Project does not involve a dam, conduit, or water diversion structure, so these sections of the Fish and Game Code would not apply. Fish passage improvements in Little Yosemite would be authorized under Section 1600 of the Fish and Game Code.

#### *California Native Plant Protection Act*

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (CNPPA), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The CNPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The CESA expanded on the original CNPPA and enhanced legal protection for plants. The

CESA established threatened and endangered species categories and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

#### *Special-Status Natural Communities*

The CDFW's Natural Heritage Division identifies special-status natural communities, which are those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The CNDDDB tracks 135 such natural communities in the same way that it tracks occurrences of special-status species: Information is maintained on each site for the natural community's location, extent, habitat quality, level of disturbance, and current protection measures. The CDFW is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of the potential impacts of a project on biological resources of statewide or regional significance.

#### **Special-Status Species in the Study Area**

A list of special-status plant and animal species that could occur in the study area – a relevant area with similar habitat surrounding the project site – was compiled based on data described above under “Approach to Analysis.” Appendix A lists 46 special-status plants and 56 special-status animals, their preferred vegetation communities and habitats, plant blooming periods, and their potential to occur in the project site or relevant vicinity. Conclusions regarding habitat suitability and species occurrence are based on the results described in previous studies, the project Habitat Assessment, the reconnaissance survey conducted by ESA on April 25, 2014, the floristic survey conducted by ESA on September 14, 2014, and the analysis of existing literature and database queries described above.

It was then determined whether there is a low, moderate, or high potential for species occurrence on the project site based on previous special-status species record locations and current site conditions. Only species with a moderate or high potential for occurrence are discussed further in this section. Species unlikely to occur within the project site or relevant vicinity due to lack of suitable habitat or range were eliminated from the discussion.

#### *Special-Status Plant Species*

Of the 46 special-status plant species listed in Appendix A, none were determined to have a moderate or high potential to occur on the project site, 16 were determined to have a low potential to occur, and 30 were determined to be entirely absent from the study area. No special-status plant species were observed during the biological resources reconnaissance survey conducted April 25, 2014. A floristic survey of the project site for special-status plants, including big tarweed (*Blepharizonia plumosa*), was conducted on September 14, 2014, following a literature review and database search documenting this species within

five miles of the project site and within similar vegetation communities contained within the project site. Big tarweed is a California Rare Plant Rank (CRPR) List 1B.1 species that occurs in valley grassland, foothill woodland, and chaparral vegetation communities and is usually found on slopes. Big tarweed is endemic to California and blooms annually between July and October. The Sunol Regional Wilderness has no recorded populations of big tarweed and none have been observed in the vicinity of the heavily traveled Camp Ohlone Road trail. Big tarweed was not identified during pre-construction and construction-period botanical surveys conducted as part of the Geary Road Bridge Replacement project in 2012. Nevertheless, suitable habitat for big tarweed is present within the project site at Staging Area 1 and in grassland communities bordering Camp Ohlone Road.

The pre-construction floristic survey was conducted on September 14, 2014 to determine whether this special-status plant occurs within the project site or a portion of suitable habitat within the study area that could be adversely affected by project implementation. A reference population located at Black Diamond Mines Regional Preserve in Antioch, CA was used to ensure the survey was performed while the plant was in bloom. The survey followed procedures outlined in the CDFG's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*.<sup>86</sup> The survey was conducted on foot in order to ensure thorough coverage of all habitats within the survey area. The survey was floristic in nature, meaning that every plant taxon that occurs in the study area was recorded and identified to the taxonomic level necessary to determine rarity and listing status. Species not identified in the field were collected and identified in a laboratory at a later date. All species were identified using *The Jepson Manual: Vascular Plants of California (Second Edition)*.<sup>87</sup> No special-status plant species, including big tarweed, were observed during the pre-construction survey within the study area. Due to the negative results of the September 14, 2014 survey and the overall low potential for occurrence of other special-status plants listed in Appendix A, no special-status plants are expected to occur in the study area or be adversely affected by project implementation.

#### *Special-Status Fish*

No special-status fish species are expected to occur within the project site. Under existing conditions, Central California coastal steelhead (*Oncorhynchus mykiss*) cannot reach Alameda Creek upstream of the BART weir. Only resident rainbow trout and California roach would be expected to occur within the project site. Neither of these species is identified as candidate, sensitive, or special status in local or regional plans or regulations by the CDFW, USFWS, or NMFS.

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<sup>86</sup> CDFG, 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Biogeographic Data Branch, Sacramento. Data dated November 24, 2009.

<sup>87</sup> Baldwin, B. et al. (ed.). 2012. *The Jepson Manual, Vascular Plants of California*, 2nd ed. University of California Press.



### *Special-Status Wildlife*

The following special-status animal species were determined to have a moderate or high potential to occur on or in suitable habitat next to the project site:

- California tiger salamander
- California red-legged frog
- Foothill yellow-legged frog
- Alameda whipsnake
- Western pond turtle
- Coast (Blainville's) horned lizard
- Long-eared owl
- White-tailed kite
- Loggerhead shrike
- California horned lark
- Yellow warbler
- Grasshopper sparrow
- Other breeding and migratory birds
- San Francisco dusky-footed woodrat
- Pallid bat
- Western mastiff bat
- Western red bat
- Hoary bat
- Ringtail

**California tiger salamander** (*Ambystoma californiense*). The Central California distinct population segment (DPS) of California tiger salamander (CTS) is federally and state listed as threatened, is federally listed as endangered in Sonoma and Santa Barbara Counties, and also is a CDFW Species of Special Concern (SSC). Adults spend most of the year in subterranean refugia, especially burrows of California ground squirrels and occasionally man-made structures.<sup>88,89</sup> CTS breed and lay eggs primarily in vernal pools and other temporary rainwater ponds following relatively warm rains in November to February.<sup>90</sup> They usually stay at the ponds a few days, but some individuals may remain up to several weeks after breeding is completed.<sup>91</sup> They disperse from the breeding sites after spending a few hours or days near the pond margin.<sup>92</sup> There are no known occurrences of this species within the project site, but individuals have been found on the CDRP site approximately 0.3 mile to the southwest. Dispersal habitat and refugia habitat for this species are present within the project site, and a known breeding pond is located approximately 0.2 mile north of Staging Area 2. USFWS Critical Habitat East Bay Region, Unit 3 for this species is designated approximately 2.5 miles southeast of the project area.

**California red-legged frog** (*Rana draytonii*). The California red-legged frog (CRLF) is federally listed as a threatened species throughout its range in California and is a CDFW SSC. This frog historically occurred over much of the state from the Sierra Nevada foothills to the coast and from Mendocino County to the

<sup>88</sup> Stebbins, R. C. 1972. *California amphibians and reptiles*. Univ. California Press, Berkeley. 152pp.

<sup>89</sup> Shaffer, H. B., R. N. Fisher, and S. E. Stanley. 1993. *Status report: the California tiger salamander (Ambystoma californiense)*. Final report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova California, under Contracts (FG9422 and 1383).

<sup>90</sup> Shaffer, H. B., and R. Fisher. 1991. *Final Report to the California Department of Fish and Game: California tiger salamander surveys, 1990--Contract (FG9422)*. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA.

<sup>91</sup> California Department of Fish and Game (CDFG). 2005. *California Wildlife Habitat Relationships System Life History Account for California Tiger Salamander*. Written by: T. Kucera, 1997. Updated by: CWHR Program Staff, August 2005.

<sup>92</sup> Jennings, M. R., and M. P. Hayes. 1994. *Amphibian and reptile species of special concern in California*. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. 225 pp.

Mexican border. CRLF typically inhabit ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Submerged root masses and undercut banks are important habitat features for this species. However, this species is capable of inhabiting a wide variety of perennial aquatic habitats as long as there is sufficient cover and bullfrogs or non-native predatory fish are not present. CRLF is known to survive in ephemeral streams, although only if deep pools with vegetative cover persist through the dry season. Factors that have contributed to the decline of CRLF include destruction of riparian habitat from development, agriculture, flood control practices, or the introduction of exotic predators such as bullfrogs, crayfish, and a variety of non-native fish. The nearest CRLF occurrence is located in Alameda Creek in between Staging Area 1 and the confluence with Calaveras Creek. Suitable breeding, dispersal, and refugia habitat is present within the project site and surrounding contiguous habitat. The project area is also located within USFWS Critical Habitat Unit ALA-2 of this species.

**Foothill yellow-legged frog** (*Rana boylei*). The foothill yellow-legged frog is listed by CDFW as a SSC. It is found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.<sup>93</sup> Unlike most other ranid, or “true”, frogs in California, this species is rarely encountered (even on rainy nights) far from permanent water.<sup>94</sup> Breeding and egg laying usually await the end of spring flooding and may commence any time from mid-March to May, depending on local water conditions.<sup>95</sup> The foothill yellow-legged frog occurs in the Coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles County, in most of northern California west of the Cascade crest, and along the western flank of the Sierra south to Kern County. Adults, metamorphs, and larvae of this species have been observed by CDRP biologists immediately downstream of the confluence of Alameda and Calaveras Creeks.<sup>96</sup> Suitable egg deposition sites exist for this species in Alameda Creek and the project site within pools near Features 9, 10, and 11. Adults and juveniles at varying stages of metamorphosis are highly likely to occur at the project site within Alameda Creek.

**Alameda whipsnake** (*Masticophis lateralis euryxanthus*). The Alameda whipsnake (also known as the Alameda striped racer) is a federal and state listed as threatened species. The Alameda whipsnake typically prefers scrub/shrub communities with a mosaic of open and closed canopy that is dominated by low- to medium-stature woody shrubs including chamise (*Adenostoma* spp.), Eastwood manzanita (*Arctostaphylos*

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<sup>93</sup> California Department of Fish and Game (CDFG). 2000. *California Wildlife Habitat Relationships System Life History Account for Foothill Yellow-legged Frog*. Written by: S. Morey. Reviewed by: T. Papenfuss. Edited by: R. Duke, E. C. Beedy. Updated by: CWHR Program Staff, January 2000.

<sup>94</sup> Ibid.

<sup>95</sup> Ibid.

<sup>96</sup> BioMaAS, 2014. *Habitat Assessment for Little Yosemite Fish Passage Project*, Alameda Creek, Sunol Valley, Alameda County, CA. Prepared for the San Francisco Public Utilities Commission.

*glandulosa* spp.), chaparral whitethorn (*Ceanothus leucodermis*), and interior live oak (*Quercus wislizeni*) shrub vegetation. Woodlands and grasslands offer foraging opportunities for prey species such as skinks, frogs, snakes, and birds. Lands containing rock outcrops, talus, and small mammal burrows are essential and are used for shelter, hibernacula, foraging, and dispersal, and provide additional prey population support functions. The whipsnake currently inhabits the Inner Coast Range mostly in Contra Costa and Alameda Counties, with additional occurrences documented in San Joaquin and Santa Clara Counties.<sup>97</sup> The nearest occurrence of Alameda whipsnake is approximately 0.5 mile south of Features 9, 10, and 11. The project area is located within USFWS Critical Habitat Unit 5B for this species.

**Western pond turtle** (*Actinemys marmorata*). The Pacific (western) pond turtle is listed as a SSC by CDFW. This species is normally associated with permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams.<sup>98</sup> Two distinct habitats may be used for oviposition: 1) along large slow-moving streams, in which eggs are deposited in nests constructed in sandy banks; and 2) along foothill streams, where females may climb hillsides, sometimes moving considerable distances to find a suitable nest site.<sup>99</sup> This species has been observed by CDRP biologists at the confluence of Alameda and Calaveras Creeks.<sup>100</sup> This species may occasionally forage in or disperse through the project site. In addition, if this species is present in Alameda Creek west of the Staging Area 1, the staging area could be used as an oviposition site.

**Coast (Blainville's) horned lizard** (*Phrynosoma blainyillii*). This species is listed by CDFW as a SSC. It occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper, and annual grassland habitats. The horned lizard inhabits open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats and is found chiefly below 600 meters in the north and 900 meters in the south.<sup>101</sup> The closest occurrence is documented approximately 6.2 miles to the northeast of the project site. Marginally suitable habitat is available for this species within and adjacent to the project site.

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<sup>97</sup> United States Fish and Wildlife Service (USFWS). U.S. Fish & Wildlife Service Sacramento Fish & Wildlife Office. Species Account. *Alameda Whipsnake. Masticophis lateralis euryxanthus*. Updated March 21, 2005.

<sup>98</sup> California Department of Fish and Game (CDFG). 2000a. *California Wildlife Habitat Relationships System Life History Account for Western Pond Turtle*. Written by: S. Morey. Reviewed by: T. Papenfuss. Edited by: R. Duke. Updated by: CWHR Program Staff, March 2000.

<sup>99</sup> Storer, T. I. 1930. Notes on the range and life-history of the Pacific fresh-water turtle, *Clemmys marmorata*. Univ. Calif. Publ. Zool. 32:429-441.

<sup>100</sup> BioMaAS, 2014. *Habitat Assessment for Little Yosemite Fish Passage Project, Alameda Creek, Sunol Valley, Alameda County, CA*. Prepared for the San Francisco Public Utilities Commission.

<sup>101</sup> California Department of Fish and Game (CDFG). 2000c. *California Wildlife Habitat Relationships System Life History Account for Coast Horned Lizard*. Written by: S. Morey. Reviewed by: T. Papenfuss. Edited by: R. Duke, D. Alley. Updated by: CWHR Program Staff, March 2000.

**Long-eared owl** (*Asio otus*). The long-eared owl is listed by CDFW as a SSC. Long-eared owl nest in conifer, oak, riparian, pinyon-juniper, and desert woodlands that are either open or are adjacent to grasslands, meadows, or shrublands.<sup>102</sup> In North America, this species breeds across central Canada and south interruptedly through northern Baja California in the West and Virginia in the East.<sup>103</sup> Long-eared owls were documented in the Sunol Regional Wilderness in 1995.<sup>104</sup> Long-eared owls could potentially nest in mature trees in and around the project site.

**White-tailed kite** (*Elanus leucurus*). The white-tailed kite is listed as Fully Protected<sup>105</sup> species under the California Fish and Game Code. This species forages in wetlands and open brushlands, usually near water and streams. Oak woodlands, valley oak or live oak, or trees along marsh edges are used for nesting sites. The nest made by this species is a frail platform of sticks, leaves, weed stalks, and similar materials located in trees or brush. A combination of habitats is essential, including open grasslands, meadows or marshes for foraging, and isolated dense topped trees for perching and nesting. The destruction of wetlands is a primary threat to this species. Grasslands and oak woodland within and adjacent to the project site provides foraging and nesting habitat for this species.

**Loggerhead shrike** (*Lanius ludovicianus*). Loggerhead shrike is a California Species of Special Concern and identified by the USFWS as a Bird of Conservation Concern. Loggerhead shrike is found throughout California in open habitats, such as grasslands or, occasionally, agricultural fields, using shrubs, trees, posts, fences, and utility lines for perching. Habitats with little to no human disturbance are preferred and edges of denser habitats are sometimes used. Insecticides and habitat loss have caused population decreases for this species. In California, loggerhead shrike breed mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. They require tall shrubs or trees (also use fences or power lines) for hunting perches, territorial advertisement, and pair maintenance; open areas of short grasses, forbs, or bare ground for hunting; and large shrubs or trees for nest placement.<sup>106</sup> They also need impaling sites for prey manipulation or storage, which can include sharp,

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<sup>102</sup>Marks, J. S., Evans, D. L., and Holt, D. W. 1994. Long-eared Owl (*Asio otus*), in *The Birds of North America* (A. Poole and F. Gill, eds.), no. 211. Acad. Nat. Sci., Philadelphia.

<sup>103</sup>Ibid.

<sup>104</sup>eBird. 2014. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available at <http://www.ebird.org>. Accessed on June 10, 2014.

<sup>105</sup>A California fully protected species cannot be taken at any time, except, under certain circumstances, in association with a species recovery plan.

<sup>106</sup>Shuford, W.D. and T. Gardali, editors. (2008). California Bird Species of Special Concern; a ranked assessment of species, subspecies and distinct populations of birds of immediate concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, and CDFW, Sacramento.

thorny, or multi-stemmed plants and barbed-wire fences.<sup>107,108</sup> The large shrubs and trees in and adjacent to the project site may provide suitable breeding habitat for this species.

**California horned lark** (*Eremophila alpestris actia*). California horned lark was, until recently, listed by the State of California as a SSC but is currently on the CDFW watchlist due to a perceived reduction in threat to the species. However, this passerine is still protected under California Fish and Game Code Section 3503, which prohibits the taking or destroying of nests or eggs of nearly all birds. This species is a permanent resident in most of California except the Sierra during winter. It is usually found in open habitat, such as grassland and agricultural areas, where trees and shrubs are absent. This species has been observed from sea level to above treeline in grasslands, deserts, and alpine dwarf-scrub habitat. Horned lark uses grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities for cover from predators. The California horned lark typically nests in dry grasslands and rangelands that provide low, sparse cover (e.g., grazed, mowed, or barren areas without trees and shrubs) between March and July. Foraging habitat includes open grasslands where insects and seeds are abundant. This species may forage and nest in grasslands within and adjacent to the project site.

**Yellow warbler** (*Dendroica petechia*). The yellow warbler is listed by CDFW as a SSC and by the USFWS as a Bird of Conservation Concern. This species occurs principally as a migrant and summer resident from late March through early October and breeds from April to late July.<sup>109</sup> Yellow warblers generally occupy riparian vegetation in close proximity to water along streams and in wet meadows. Throughout, they are found in willows and cottonwoods (*Populus* spp.), and in California they are found in numerous other species of riparian shrubs or trees, varying by biogeographic region.<sup>110</sup> This species is known to occur within the study area.<sup>111</sup> The trees in and adjacent to Alameda Creek and the project site may provide suitable breeding habitat for this species.

**Grasshopper sparrow** (*Ammodramus savannarum*). The grasshopper sparrow is listed by CDFW as a SSC. It occurs in California primarily as a summer resident from March to September.<sup>112</sup> In general, grasshopper sparrows in California prefer short to middle-height, moderately open grasslands with

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<sup>107</sup> Yosef, R. 1996. Loggerhead Shrike (*Lanius ludovicianus*), in *The Birds of North America* (A. Poole and F. Gill, eds.), no. 231. Acad. Nat. Sci., Philadelphia.

<sup>108</sup> Pruitt, L. 2000. Loggerhead Shrike status assessment. U.S. Fish & Wildl. Serv., Bloomington, IN.

<sup>109</sup> Dunn, J. L., and Garrett, K. L. 1997. *A Field Guide to Warblers of North America*. Houghton Mifflin, Boston.

<sup>110</sup> Shuford, W. D. 1993. *The Marin County Breeding Bird Atlas: A Distributional and Natural History of Coastal California Birds*. California Avifauna Series 1. Bushtit Books, Bolinas, CA.

<sup>111</sup> BioMaAS, 2014. *Habitat Assessment for Little Yosemite Fish Passage Project*, Alameda Creek, Sunol Valley, Alameda County, CA. Prepared for the San Francisco Public Utilities Commission.

<sup>112</sup> McCaskie, G., DeBenedictis, P., Erickson, R., and Morlan, J. 1979. *Birds of northern California: An annotated field list*, 2nd ed. Golden Gate Audubon Soc., Berkeley.

scattered shrubs.<sup>113</sup> Grasshopper sparrows build nests domed with grasses and with a side entrance, typically well concealed in depressions at the base of grass clumps with the rim approximately level to the ground.<sup>114</sup> The grassland within and adjacent to the project site may provide suitable breeding habitat for this species.

**Other breeding and migratory birds.** Sunol Regional Wilderness provides habitat for a diversity of birds, with some species as year-round residents, other species as winter residents, and still others passing through during spring and fall migrations. Trees, shrubs, and grasslands within the project area provide foraging and nesting habitat for a variety of birds as well as habitat for potential use by migrants as stop-over sites. As discussed above under “Regulatory Framework,” most migratory birds are protected from harm by the federal Migratory Bird Treaty Act and nearly all breeding birds in California are protected under the California Fish and Game Code (Section 3503). Cooper’s hawk, American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and Great horned owl (*Bubo virginianus*) may forage and nest in the mature trees within and surrounding the project site.

**San Francisco dusky-footed woodrat** (*Neotoma fuscipes annectens*). The San Francisco dusky-footed woodrat is a CDFW SSC. Woodrats often occupy habitats with both woodland and scrub components that provide cover and food sources, such as live oak, coffeeberry (*Frangula (=Rhamnus) californica*), blackberry (*Rubus* spp.), gooseberry (*Ribes* spp.), poison oak, and honeysuckle (*Lonicera* spp.).<sup>115</sup> Nests are typically over 3 feet in diameter and are constructed out of piled sticks, leaves and grasses. Stick houses of this species were observed adjacent to but not within the project site during the reconnaissance site visit. Potential nest habitat exists for this species in the trees, shrubs, and rock crevices within oak woodland and California sagebrush scrub habitat surrounding the project site.

**Pallid bat** (*Antrozous pallidus*). The pallid bat is a CDFW SSC. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern Counties, and the northwestern corner of the state from Del Norte and western Siskiyou Counties to northern Mendocino County.<sup>116</sup> This large pale bat establishes maternity roosts in crevices in rocky outcrops and cliffs, caves, mines, hollowed trees, large tree cavities, and vacant buildings.<sup>117</sup> The mature trees and rock crevices in and adjacent to the project site

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<sup>113</sup> Shuford, W.D. and T. Gardali, editors. (2008). California Bird Species of Special Concern; a ranked assessment of species, subspecies and distinct populations of birds of immediate concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, and CDFW, Sacramento.

<sup>114</sup> Vickery, P. D. 1996. Grasshopper Sparrow (*Ammodramus savaannarum*), in The Birds of North America (A. Poole and F. Gill, eds.), no. 239. Acad. Nat. Sci., Philadelphia.

<sup>115</sup> Linsdale, J.M. and L.P Tevis Jr. 1951. The dusky-footed wood rat: a record of observations made on the Hastings Natural History Reservations. University of California, Berkeley.

<sup>116</sup> Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California’s Wildlife, Volumes I-III.

<sup>117</sup> Sherwin, R. 2005. Pallid bat. Western Bat Working Group. Available online at: [http://www.wbwg.org/speciesinfo/species\\_accounts/molossididae/eupe.pdf](http://www.wbwg.org/speciesinfo/species_accounts/molossididae/eupe.pdf).



within the Alameda Creek riparian corridor may provide suitable roost habitat for this species. Anecdotal evidence suggests that the bat colony occupying the Old Green Barn Visitor Center on Geary Road may be pallid bat.

**Western mastiff bat** (*Eumops perotis*). The western mastiff bat is a CDFW SSC. It is an uncommon resident in southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through southern California, from the coast eastward to the Colorado Desert. It occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.<sup>118</sup> The rock crevices within and adjacent to the project site within Alameda Creek riparian corridor may provide suitable roost habitat for this species.

**Western red bat** (*Lasiurus borealis*). The western red bat is a CDFW SSC. The red bat is found throughout California in wooded areas at lower elevations. The bat winters in the lowlands of California. The red bat prefers snags and trees with moderately dense canopies for roosting and may roost as low as 4 feet off the ground among dense foliage that provides shade during the day and that is open below to allow escape for feeding at night. The red bat is often associated with riparian habitats.<sup>119</sup> The Alameda Creek riparian corridor vegetation within the project site may provide suitable roosting habitat for this species.

**Hoary bat** (*Lasiurus cinereus*). The hoary bat is a CDFW SSC. This bat species is the most widespread North American bat and may be found at any location in California, although distribution is patchy in the southeastern deserts. The hoary bat generally roosts in dense foliage of medium to large trees with preferred sites hidden from above, with few branches below, and that have ground cover of low reflectivity.<sup>120</sup> The medium to large trees in the Alameda Creek riparian corridor and within the project site may provide suitable roost habitat for this species.

**Ringtail** (*Bassariscus astutus*). This CDFW fully protected species is a widely distributed and common to uncommon permanent resident in California and occurs in various riparian habitats, and in brush stands of most forest and shrub habitats, at low to middle elevations.<sup>121</sup> Ringtails are nocturnal carnivores with some crepuscular activity and are solitary, except for the breeding season.<sup>122,123</sup> They breed at the end of

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<sup>118</sup> Ibid.

<sup>119</sup> Pierson, Elizabeth, 1988. The Status of Townsend's Big-Eared Bat (*Plecotus townsendii*) in California. Wildland Resources Center. University of California, Berkeley.

<sup>120</sup> Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife, Volumes I-III.

<sup>121</sup> California Department of Fish and Game (CDFG). 2005c. *California Wildlife Habitat Relationships System Life History Account for Ringtail*. Written by: G. Ahlborn. Reviewed by: M. White. Edited by: M. White. Updated by: CWHR Program Staff, February 2005.

<sup>122</sup> Toweill, D. E. and Toweill, D. B. 1978. Growth and development of captive ringtails (*Bassariscus astutus flavus*). *Carnivore* 1: 46-53.

<sup>123</sup> Poglayen-Neuwall, I. and Toweill, D. E. 1988. *Bassariscus astutus*. *Mammalian Species* 327: 1-8.

February and give birth in May.<sup>124</sup> Suitable cover, foraging, and breeding habitat is available for this species in the project site and in surrounding suitable habitat.

#### *Special-Status Natural Communities*

Sycamore Alluvial Woodland is a designated special-status natural community that occurs within 5 miles of the project site but not within areas that would be affected by the proposed project. While California sycamore trees occur in the riparian corridor of Alameda Creek, other elements that compose the Sycamore Alluvial Woodland community are absent (e.g., braided depositional channels within a wide floodplain, intermittent streams). Therefore, no significant natural communities occur within the proposed project site.

#### *Critical Habitat*

The USFWS can designate critical habitat for species that have listed as threatened or endangered. “Critical habitat” is defined in Section 3(5)(A) of the federal Endangered Species Act as those lands (or waters) within a listed species’ current range that contain the physical or biological features that are considered essential to its conservation. The project area is located within designated critical habitat for California tiger salamander, California red-legged frog, and Alameda whipsnake. Critical habitat for Central California coastal steelhead (CCC steelhead) includes all river reaches and estuarine areas accessible to steelhead in coastal river basins, from the Russian River to Aptos Creek (inclusive), and the drainages of San Francisco and San Pablo Bays. Also included are adjacent riparian zones, all waters of San Pablo Bay west of the Carquinez Bridge, and all waters of San Francisco Bay to the Golden Gate. Alameda Creek upstream of the BART weir, including the project site, is not in designated critical habitat for CCC steelhead because the area is located well upstream of substantial barriers to anadromous fish.

#### *Impact Analysis*

**Impact BI-1: The project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)**

#### *Special-Status Plant Species*

The overall potential for the project site to support special-status plants is low, based on the lack of historical presence in the project site and surrounding relevant vicinity, lack of supportive vegetation communities within the project work areas and staging areas, and negative results of a pre-construction special-status plant survey conducted in September 2014. Of the 46 special-status plants listed in Appendix A, 30 species were determined to be absent from the project area primarily due to lack of

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<sup>124</sup> Poglayen-Neuwall, I. 1980. *Gestation period and parturition on the ringtail Bassariscus astutus* (Lichtenstein, 1830). *Zeitschrift für Säugetierkunde* 45: 73-81.

specialized supportive communities required by these species, such as vernal pools or serpentine soils. The 2014 floristic survey conducted during the identification period for big tarweed determined a population of this special-status species is not present within the portion of the project study area containing suitable habitat that could be adversely affected by the project. Therefore, the project would have no impact on special-status plants.

#### *Special-Status Wildlife Species*

The project could have significant adverse impacts on special-status wildlife species that are known to occur or have a moderate or high potential to occur within or adjacent to the project area. Areas within or next to the project site contain suitable habitat that may support special-status wildlife species California tiger salamander, California red-legged frog, foothill yellow-legged frog, Alameda whipsnake, coastal horned lizard, western pond turtle, special-status nesting and migratory birds, special-status bats, San Francisco dusky-footed woodrat, and ringtail. Project implementation could have an adverse effect on these special-status species during project construction. The effects could be direct (e.g., harassment or take of an individual) or indirect (e.g., modifying existing habitat, disrupting foraging and nesting efforts, or interfering with movement).

Construction activities that could cause direct impacts on special-status wildlife species include ground disturbance (e.g., grading and excavation) to accommodate the use of staging areas and the installation of temporary stair system and work platform; transportation of materials along project access roads; rock chipping and excavation within Alameda Creek to accommodate concrete weirs; and dewatering of the three feature sites for work within the creek bed. These activities would occur during the approximately four-month construction period, with potential impacts minimized through the implementation of the mitigation measures described below. Potential indirect effects would be limited to the duration of project construction and would be minimized as discussed in mitigation measures presented below.

The concrete weirs would be expected to last approximately 20 to 30 years and would undergo periodic inspection by SFPUC for gaps and leaks with adjacent boulders, cracking or spalling of the concrete, excessive wear of the concrete or exposure of reinforcing steel, and redirected water flow around the weirs resulting from the dynamic nature of the creek. These inspections would not be expected to have adverse effects on special-status wildlife associated with Alameda Creek. Any necessary maintenance and repair activities that require work within the creek channel would be conducted in conformance with the terms of resource agency permits and applicable environmental laws and regulations.

Implementation of the mitigation measures described below would reduce construction impacts on special-status wildlife species to a less-than-significant level by avoiding and reducing habitat disturbance where feasible, excluding wildlife from entering project areas during construction, conducting surveys for listed

species prior to construction, avoiding disturbance to nesting birds and roosting bats through seasonal work limits or buffers around active nests or roosts, and requiring monitoring of construction activities by a qualified biologist. The following subsections provide more detailed information on potential project impacts on special-status species and their associated habitats.

### Special-Status Amphibians and Reptiles

Suitable aquatic habitat and foraging habitat for foothill yellow-legged frog and western pond turtle occurs within the project site and foothill yellow-legged frogs are known to breed in the Little Yosemite reach of Alameda Creek. The project site also contains suitable foraging and upland dispersal habitat for California tiger salamander, California red-legged frog, Alameda whipsnake, and coast horned lizard. Proposed construction activities, particularly ground disturbance, such as grading of staging areas, transportation or staging of materials and equipment, installation of the temporary stair system and work platform, and installation of the concrete weirs within Alameda Creek, while temporary and limited in their areal extent, could have a substantial adverse effect on these species directly or through habitat modification. In addition, dewatering of Alameda Creek at Features 9, 10, and 11 could impede dispersal movements of these species. Implementation of **Mitigation Measures M-BI-1a through M-BI-1e** would reduce such impacts on these species to a less-than-significant level through a mandatory training of construction crews to identify sensitive environmental resources in the project vicinity (e.g., special-status wildlife with potential to occur onsite and adjacent sensitive habitat areas and vegetation communities), along with implementation of specific protection and avoidance measures such as erecting exclusionary fencing around staging areas, conducting pre-construction surveys and biological monitoring during construction, and requiring additional protection measures during project implementation.

#### **Mitigation Measure M-BI-1a: Worker Environmental Awareness Program Training.**

A project-specific Worker Environmental Awareness Program (WEAP) training shall be developed and implemented by a qualified biologist for the project and attended by all construction personnel prior to beginning work onsite. The training could consist of a recorded presentation that could be reused for new personnel. The WEAP training shall generally include but not be limited to the following:

- Applicable State and federal laws, environmental regulations, project permit conditions, and penalties for non-compliance;
- Special-status plant, fish, and wildlife species with potential to occur at or in the vicinity of the project site, avoidance measures, and a protocol for encountering such species including a communication chain;
- Pre-construction surveys and biological monitoring requirements associated with each phase of work;
- Known sensitive resource areas in the project vicinity that are to be avoided and/or protected as well as approved project work areas; and

- Best management practices (BMPs) and their location on the project site for erosion control and/or species exclusion.

**Mitigation Measure M-BI-1b: Onsite Biological Monitoring During Construction Activities.**

A qualified biological monitor shall be onsite during ground disturbance (i.e., vegetation removal; grading of work areas; excavation of the creek bed or bank to accommodate temporary stair system, work platform, or concrete weirs; installation of species exclusion fencing and/or silt fencing; site restoration) and dewatering of the work areas within Alameda Creek. Following these activities, the biological monitor shall conduct weekly site visits throughout the duration of project construction to ensure implementation of and compliance with project mitigation measures, such as inspecting the integrity of the exclusion fence and providing environmental training of new workers on the project.

The biological monitor shall have authority to stop construction activities and develop alternative work practices, in consultation with construction personnel and resource agencies, if construction activities are likely to affect special-status species or other sensitive biological resources.

Only the qualified biological monitor shall relocate animals that may enter work areas outside of the project site boundaries. Federally and State-listed species shall be relocated by qualified biologists as authorized by United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If a special-status species enters the project site while the qualified biological monitor is not onsite, the construction supervisor shall stop all work within 100 feet of the individual and contact the SFPUC project manager and qualified biological monitor to relocate the species. If relocation is not timely or feasible, the construction supervisor and/or biological monitor shall monitor the individual and no work shall recommence until it moves at least 100 feet beyond the project site on its own accord.

**Mitigation Measure M-BI-1c: Species Exclusion Fencing.**

To prevent special-status species from moving through the project site, the SFPUC or its contractors shall install temporary exclusion fencing around key project boundaries, including all project staging areas. Fencing shall be installed immediately prior to the start of construction activities. The SFPUC shall ensure that the temporary exclusion fencing is continuously maintained until all construction activities are completed. The fence shall be CDFW-approved species exclusion fencing, with a minimum height of 3 feet above ground surface, with an additional 4 to 6 inches of fence material buried such that species cannot crawl under the fence, and shall include escape funnels to allow species to exit the work areas. The exclusion fence shall not cross Alameda Creek but shall be installed around project staging areas at the top of bank, confining species movement to within the channel or areas unaffected by project activities.

A qualified biological monitor shall be onsite during initial vegetation clearing, grading, and installation of the fencing to survey and relocate animals outside of the work area boundaries. Federally and State-listed species shall be relocated by qualified biologists as authorized by the USFWS and CDFW. The exclusion fencing shall be removed only after construction of the project is entirely completed.

Exclusion construction fencing and explanatory signage shall be placed around the perimeter of sensitive vegetation communities (i.e., oak woodlands and special-status plant communities within or immediately adjacent to the project site) that could be affected by construction activities throughout the period during which such impacts could occur. Signage shall state "Sensitive Resource – Keep Out."

**Mitigation Measure M-BI-1d: General Mitigation Measures during Construction.**

The SFPUC shall ensure that the following general measures are implemented by the contractor while working in the project site during construction to prevent and minimize impacts on special-status species and sensitive natural communities:

- Project-related vehicles shall observe a 15 mile-per-hour speed limit on unpaved roads in the project site.
- No firearms or pets shall be allowed in the project site.
- The contractor shall provide closed garbage containers for the disposal of all food-related trash items. 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 fish or wildlife to the project site.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas, and spill kits containing cleanup materials shall be available onsite. The project Storm Water Pollution Prevention Plan (SWPPP) shall stipulate the minimum distance that maintenance activity must be from waters of the United States.
- Project personnel shall be required to report immediately any harm, injury, or mortality of a listed species (federal or state) during construction, including entrapment, to the construction foreman or biological monitor, who will in turn 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 1 working day of the incident. The SFPUC shall follow up with written notification to the appropriate agencies within 5 working days of the incident. All special-status species observations shall be recorded on California Natural Diversity Data Base (CNDDDB) field sheets and sent to the CDFW by the SFPUC.
- The spread of invasive non-native plant species and plant pathogens shall be avoided or minimized by implementing the following measures:
  - Construction equipment shall arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species.
  - Any imported fill material soil amendments, gravel, or other materials required for construction and/or restoration activities that will be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material.
  - Certified weed-free imported erosion control materials (or rice straw in upland areas) shall be used exclusively, if possible.
  - To reduce the movement of invasive weeds into uninfested areas, the contractor shall stockpile topsoil removed during excavation (e.g., during grading of staging areas or excavation to accommodate installation of the temporary stair system and work platform) and shall subsequently reuse the stockpiled soil for re-establishment of disturbed project areas.

**Mitigation Measure M-BI-1e: Avoidance, Minimization, and Habitat Restoration and Enhancement Measures for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake.**

The following conservation measures shall be implemented to minimize or eliminate potential adverse impacts on California tiger salamander, California red-legged frog, and Alameda whipsnake during project-related activities:



- Project areas disturbed by vegetation removal, grading of staging areas, excavation to accommodate the installation of the temporary stair system and work platform shall be revegetated, at the direction of a qualified botanist or restoration specialist, with an appropriate assemblage of native vegetation suitable for the area.
- As necessary, erosion control measures shall be implemented to prevent any soil or other materials from entering any nearby aquatic habitat (e.g., Staging Areas 2 and 3 and downslope of the temporary wooden access stairways). Erosion control measures shall be installed adjacent to suitable aquatic habitat to prevent soil from eroding or falling into the area.
- Locations of erosion control measures and the types of appropriate sediment control measures shall be specified in the SWPPP. Sediment control measures shall be furnished, constructed, maintained, and later removed as shown in the SWPPP. Plastic monofilament of any kind (including those labeled as biodegradable, photodegradable, or UV-degradable) shall not be used. Only natural burlap, coir, or jute wrapped fiber rolls shall be used.
- All trenches of a depth of 2 feet or greater shall be covered at the end of each workday, or escape ramps shall be installed in the trench every 3 feet to allow wildlife that fall in a means to escape.
- Construction activities in suitable California tiger salamander and California red-legged frog upland habitat should ideally be conducted in the dry season, April 15 through October 15.
- A pre-construction survey shall be conducted within 14 days prior to ground-disturbing construction activity that occurs in designated suitable upland habitat. The survey shall include careful inspection of all potential refugia. Any California tiger salamander or California red-legged frog found shall be captured and held for a minimum amount of time necessary to relocate the animal to a suitable location a minimum of 300 feet outside of the work area or be allowed to move out of project site on its own accord. Vehicles parked overnight shall be inspected for harboring species each morning before they are moved.

A qualified biologist shall use best practices for capture, storage, and transport of California tiger salamanders and California red-legged frogs, including not using latex gloves to handle amphibians; having clean hands that are free of lotions, soaps, and insect repellents; and keeping individuals in a cool, moist, aerated environment while in captivity.

### ***Habitat Restoration Plan***

The SFPUC shall prepare a **Habitat Restoration Plan** to be implemented by the contractor for the project. The Habitat Restoration Plan shall be subject to resource agency review and implemented in coordination with applicable resource agency permit requirements. The Habitat Restoration Plan shall detail restoration activities required for any aquatic and upland habitats temporarily affected by project construction-related activities to restore the areas to pre-project conditions. Site-specific restoration measures and performance standards shall be outlined in the restoration component of the plan. The plan shall identify the locations to be restored; a suitable plant palette for each site and/or habitat; planting methods and materials to be used (e.g., seed/propogules collection, cleaning, and storage, etc.); installation timing and monitoring schedule; monitoring methods; potential contingency measures or adaptive management approach; and reporting guidelines. The annual monitoring reports shall be submitted to the applicable resource agencies. The Habitat Restoration Plan shall also detail suitable habitat enhancements to be completed at the project site as part of the project for California tiger salamander, California red-legged frog, and Alameda whipsnake. The plan shall include performance standards for monitoring habitat restoration and enhancement activities

with respect to these protected species as well as response actions to be implemented if the performance standards are not met. These actions may include preservation of additional habitat for California tiger salamander, California red-legged frog, and Alameda whipsnake within CDFW- and/or USFWS-approved conservation area.

The Habitat Restoration Plan shall be submitted to applicable resource agencies such as the United States Army Corps of Engineers, Regional Water Quality Control Board, CDFW, and USFWS. The SFPUC shall ensure that a qualified biologist, botanist, or restoration specialist reviews the restoration efforts in all vegetation communities. Described below are the minimum restoration and compensation measures that shall be included in the plan.

#### *Invasive Weed Control Measures*

To avoid or minimize the introduction or spread of invasive weeds such as yellow star-thistle, purple star-thistle (*Centaurea calcitrapa*), Italian thistle, bull thistle (*Cirsium vulgare*), barb goat grass (*Aegilops triuncialis*), and medusa head grass (*Elymus caput-medusae*) into uninfested areas, the SFPUC shall incorporate the measures to control invasive weeds outlined in Mitigation Measures M-BI-1a and M-BI-1d.

#### *Minimum Restoration Measures for Temporarily Affected Areas*

Temporarily disturbed areas located within the limits of construction but outside of the permanent impact area shall be restored to their baseline conditions. These areas include project staging areas and the footprint of temporary access system to Alameda Creek. Baseline conditions shall be identified for all affected habitats requiring mitigation under the project by conducting surveys of affected areas during the appropriate season and prior to the start of construction. Survey data shall document species composition, total vegetation cover (by vegetation type), total cover of weeds, and total cover of native and non-native species. These data shall inform the writing of the restoration plan and development of appropriate performance standards for each restoration area.

#### *Minimum Performance Standards*

The performance standards for restoring temporarily disturbed areas and compensation planting areas shall be as follows:

- All areas of oak woodland, California sagebrush scrub, California sycamore, and non-native grassland temporarily disturbed during vegetation removal and ground disturbance associated with staging area preparation or installation of the stair system and work platform shall be restored to their approximate pre-construction condition. Annual grassland vegetation shall be reseeded with a native grass and forb seed mix. Percent cover and vegetation composition (other than non-native annual grassland) shall meet cover and composition criteria determined in consultation with applicable permitting agencies with the intent to return affected areas to baseline conditions
- Temporarily affected and restored areas shall be monitored at least once a year for at least 5 years or longer, as determined in consultation with the applicable permitting agencies and/or as needed, to verify whether the vegetation is fully established and self-sustaining. Trees planted in riparian areas shall be monitored for 10 years.
- If full maturity of slow-growing vegetation takes longer than 5 years, such species shall be fully established and self-sustaining to meet the standards, and the monitoring period shall be extended accordingly to verify if the vegetation is fully established and self-sustaining.

- Oak woodland, California sagebrush scrub, California sycamore, and non-native grassland shall be monitored for the first 5 years for invasive species. The relative cover of invasive plant species shall not exceed 10 percent in any year. Invasive plant species shall be defined as any high- or moderate-level species on the California Invasive Plant Inventory or as A or B level species, as applicable, on the California Department of Food and Agriculture pest rating list.
- Winter/early spring monitoring for invasive weed seedlings shall occur in the first 2 years following installation. This monitoring will allow problem weed areas to be identified early and appropriate treatments can be planned and carried out. Successful weed management during the restoration establishment phase (first 2 years) when weed populations are small is critical for preventing costly future maintenance and chronic invasive weed issues in the restoration areas.
- Maintenance and monitoring shall continue until the performance standards are met. If performance standards cannot be met within 5 years, the SFPUC may explore alternative mitigation options with the applicable resource agencies, such as offsite compensation or mitigation credits.

### Special-Status and Migratory Birds

Construction activities, especially those that involve the use of mechanized equipment (e.g., grading, pumping concrete, chipping rocks), may adversely affect nesting bird species within ¼ mile of the project site during the nesting season (February 1–August 30). Suitable foraging and nesting habitat is present in the project vicinity for yellow warbler (California SSC), California horned lark (California watch list species), loggerhead shrike (California SSC), grasshopper sparrow (California SSC), white-tailed kite (California fully protected species), long-eared owl (California SSC), Cooper’s hawk, and sharp-shinned hawk (both California watch list species). Migratory and native raptor and passerine (perching) bird species are also known to forage and/or nest in the mature oak woodland forest, sagebrush scrub, and riparian habitats within and surrounding the project site.

Removal of scrub and riparian vegetation and trimming of trees at the project site could destroy active bird nests. In addition, adverse effects, such as noise and visual disturbance, could disrupt nesting efforts in these habitats. The loss of an active nest would be considered a significant impact under CEQA, if that nest were occupied by a special-status bird species. Moreover, disruption of nesting migratory or native birds is not permitted under the federal MBTA or the California Fish and Game Code, as it could constitute unauthorized take. Thus, the loss of any active nest by, for example, trimming a tree or removing a shrub containing a nest, must be avoided under federal and California law. Although compliance with existing state and federal regulations would prevent impacts on nesting birds, implementation of **Mitigation Measure M-BI-1f (Nesting Bird Protection Measures)** would further ensure that the project would not have a significant impact on nesting birds by limiting removal of vegetation to periods outside of the bird nesting season, to the extent feasible, and establishing no work buffer zones around active nests on or near the project site.

### **Mitigation Measure M-BI-1f: Nesting Bird Protection Measures.**

Nesting birds and their nests shall be protected during construction by use of the following measures:

- Removal of scrub and riparian vegetation and trimming of trees shall occur outside the bird nesting season (February 1 to August 30), to the extent feasible.
- If removal of scrub and riparian vegetation and trimming of trees during bird nesting season cannot be fully avoided, a qualified wildlife biologist shall conduct pre-construction nesting surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys shall be performed for the project site and suitable habitat within 250 feet of the project site in order to locate any active passerine (perching bird) nests and within 500 feet of the project site to locate any active raptor (birds of prey) nests.
- If active nests are located during the pre-construction bird nesting surveys, the wildlife biologist shall evaluate if the schedule of construction activities could affect the active nests and the following measures shall be implemented based on their determination:
  - If construction is not likely to affect the active nest, it may proceed without restriction; however, a biologist shall regularly monitor the nest to confirm there is no adverse effect and may revise their determination at any time during the nesting season. In this case, the following measure would apply.
  - If construction may affect the active nest, the biologist shall establish a no disturbance buffer. Typically, these buffer distances are between 25 feet and 250 feet for passerines and between 300 feet and 500 feet for raptors. These distances may be adjusted depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or active trail) and if an obstruction, such as a large rock formation, is within line-of-sight between the nest and construction. For bird species that are federally and/or State-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), an SFPUC representative, supported by the wildlife biologist, shall consult with the USFWS and/or CDFW regarding modifying nest buffers, prohibiting construction within the buffer, modifying construction, and removing or relocating active nests that are found on the site.
- Any birds that begin nesting within the project site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases.

### **Special-Status Bats**

Project activities including tree trimming, rock modification and/or removal, and installation of the concrete weirs within Alameda Creek could result in disturbance to special-status bats roosting nearby. Pallid bat and western mastiff bat (both California SSC) could roost in rock crevices or outcrops within the Little Yosemite reach of Alameda Creek, and hoary bat (Western Bat Working Group-Medium Priority) could roost in oak or sycamore trees within and surrounding the project site. Direct mortality of an individual or disturbance to maternity colonies of special-status bats would be a significant impact. Implementing Mitigation Measures M-BI-1a through M-BI-1b (described above) and **Mitigation Measure M-BI-1g (Avoidance and Minimization Measures for Special-Status Bats)** would reduce potential impacts on special-status bats to a less-than-significant level by increasing worker education regarding

the potential presence and sensitivities of these species, requiring pre-construction surveys, and implementing avoidance measures if potential roosting habitat or active roosts are located.

**Mitigation Measure M-BI-1g: Avoidance and Minimization Measures for Special-Status Bats.**

In coordination with the SFPUC, a pre-construction survey for special-status bats shall be conducted by a qualified biologist in advance of tree trimming and disturbance to rocks within Alameda Creek to characterize potential bat habitat and identify active roost sites. Should potential roosting habitat or active bat roosts be found in trees and/or rock crevices or outcrops to be disturbed under the project, the following measures shall be implemented:

- Trimming of trees and disturbance to rock crevices or outcrops shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 to August 15) and outside of months of winter torpor (approximately October 15 to February 28), to the extent feasible.
- If trimming of trees and disturbance to rock crevices or outcrops during the periods when bats are active is not feasible and bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where these activities are planned, a no-disturbance buffer as determined by a qualified biologist shall be established around these roost sites until they are determined to be no longer in-use as maternity or hibernation roosts.

Buffer distances may be adjusted around roosts depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or active trail) and if an obstruction, such as a large rock formation, is within line-of-sight between the nest and construction. For bat species that are State-listed sensitive species (i.e. any of the species of special concern with potential to occur on the project site), an SFPUC representative, supported by the wildlife biologist, shall consult with CDFW regarding modifying roosts buffers, prohibiting construction within the buffer, and modifying construction around maternity and hibernation roosts.

- The qualified biologist shall be present during tree trimming and disturbance to rock crevices or outcrops if bat roosts are present. Trees and rock crevices with roosts shall be disturbed only when no rain is occurring or is forecast to occur for 3 days and when daytime temperatures are at least 50 degrees Fahrenheit (°F).
- Trimming of trees containing or suspected to contain roost sites shall be done under supervision of the qualified biologist. Branches and limbs not containing cavities or fissures in which bats could roost shall be cut only using chainsaws. Branches or limbs containing roost sites shall be trimmed the following day, under the supervision of the qualified biologist, also using chainsaws.
- Rock crevices or outcrops containing or suspected to contain bat roosts within the project site shall be disturbed under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. These areas shall be modified to significantly change the roost conditions, causing bats to abandon and not return to the roost.
- Bat roosts that begin during remediation shall be presumed to be unaffected, and no buffer would be necessary.

**San Francisco Dusky-Footed Woodrat**

San Francisco dusky-footed woodrat (a California SSC) has the potential to occur in oak woodland habitat within and in the vicinity of the project site. Proposed construction activities, such as grading of staging

areas and transportation or staging of materials and equipment, could have a substantial adverse effect on this species should active middens (nests) be present in areas where project activities are planned. Implementing Mitigation Measures M-BI-1a through M-BI-1d (described above) and **Mitigation Measure M-BI-1h (Avoidance and Minimization Measures for San Francisco Dusky-Footed Woodrat)** would reduce potential impacts on these species to a less-than-significant level by increasing worker education regarding the potential presence and sensitivity of these species, conducting pre-construction surveys and biological monitoring during construction, and requiring additional protection measures during project implementation.

**Mitigation Measure M-BI-1h: Avoidance and Minimization Measures for San Francisco Dusky-Footed Woodrat.**

In coordination with the SFPUC, a pre-construction survey for San Francisco dusky-footed woodrat middens shall be conducted by a qualified biologist prior to the start of construction in suitable habitat (i.e. oak woodland and California sagebrush scrub surrounding Staging Areas 1, 2, 3, and along Camp Ohlone Road). Active middens identified within the project site shall be flagged as a sensitive resource and avoided during construction, if feasible. Should avoidance of active woodrat middens within the project site not be feasible, the middens shall be dismantled by hand under the supervision of a qualified biologist. If young are encountered during dismantling of the nest, material shall be replaced and a 50-foot no-disturbance buffer shall be established around the active midden. The buffer shall remain in place until young have matured enough to disperse on their own accord and the midden is no longer active. Nesting substrate shall then be collected and relocated to suitable oak woodland habitat outside of the project area. Appropriate safety gear (e.g., respirator, gloves, and tyvek suit) shall be used by the qualified biologist while relocating woodrat nests.

## Ringtail

Ringtail (a CDFW Fully Protected species) has the potential to inhabit the riparian corridor of Alameda Creek and surrounding habitat in boulder outcrops, tree hollows and snags of the project site. Suitable foraging and breeding habitat for this species is present within the project site. Proposed construction activities, such as transportation or staging of materials and equipment, installation of temporary wooden stairways and access adjacent to Alameda Creek, and installation of the concrete weirs, could have a substantial adverse effect on this species should ringtail dens be established where project activities are planned to occur. Implementing Mitigation Measures M-BI-1a, M-BI-1b, and M-BI-1d (described above), and **Mitigation Measure M-BI-1i (Avoidance and Minimization Measures for Ringtail)** would reduce potential impacts on these species to a less-than-significant level by increasing worker awareness of the potential presence and sensitivity of the species, conducting biological monitoring during construction, and requiring additional protection measures during project implementation.

**Mitigation Measure M-BI-1i: Avoidance and Minimization Measures for Ringtail.**

In coordination with SFPUC, a pre-construction survey for ringtail dens shall be conducted by a qualified biologist prior to the start of construction within the Alameda Creek riparian corridor



portion of the project site and surrounding suitable habitat. Should a ringtail be found residing in an active den within the project site, a no-disturbance buffer around the den would be determined by the surveying biologist, in consultation with CDFW, and remain in place until the den is no longer in use or until CDFW provides approval to displace animals from the site.

**Impact BI-2: The project could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)**

The project site supports oak woodland and California sycamore riparian habitat, which are sensitive natural communities. Substantial impacts on these communities would constitute a significant impact. Temporary disturbance of these areas (e.g., tree trimming, staging of equipment and materials) would occur as a result of the project. No tree removal would occur under the proposed project. Temporary impacts would be limited through implementation of Mitigation Measures M-BI-1a through M-BI-1e and **Mitigation Measure M-BI-2 (Avoidance and Minimization Measures for Native Trees)**, which require worker environmental awareness training, the presence of an onsite biological monitoring during construction, installation of exclusion fencing, implementation of general construction measures, and avoidance and minimization measures for native trees. Temporary disturbance to sensitive communities would also be addressed through implementation of Mitigation Measure M-BI-1e, which requires the restoration of all areas of temporarily disturbed habitat. Together, these measures would ensure that substantial impacts on oak woodland and California sycamore riparian habitat are avoided. With mitigation, the project's temporary impacts on these communities would be less than significant.

**Mitigation Measure M-BI-2: Avoidance and Minimization Measures for Native Trees.**

The SFPUC shall avoid and minimize impacts on native mature trees (defined as trees with a diameter at breast height of 6 inches or an aggregate 10-inch diameter at breast height for multi-trunk trees) within areas of temporary impacts by ensuring the contractor implements the following measures:

- A qualified arborist (defined as an International Society of Arboriculture-certified arborist or a consulting arborist who is a member of the American Society of Consulting Arborists) or qualified biologist shall delineate the location of protective fencing to be installed between protected trees and areas to be affected under project construction (e.g., staging areas and access roads). This tree protection zone shall at least equal the dripline of the trees to be protected. Protective fencing shall be highly visible, orange snow-fencing, or a material of similar visibility, and installed with t-stakes.
- For native mature trees on slopes, if ground-disturbing work is to be performed upslope of any such trees, a silt fence shall be installed at the upslope base of the tree protection fence (e.g., top of bank), where feasible, to prevent soil from drifting down over the root zone (within the tree dripline). Should the installation of silt fence not be feasible any soil which drifts onto the root zone of protected trees shall be removed on a daily basis and immediately following the ground disturbing activity which deposits such soil.

- The contractor shall be required to perform any tree trimming necessary for the project using the pruning guidelines set forth in the American National Standards Institute (ANSI) A300 standards for pruning.
- Prior to trimming trees within the project site, the contractor shall visually inspect trees for symptoms of sudden oak death (SOD) and the potential presence of the plant pathogen *Phytophthora ramorum* known to cause SOD. If diseased trees are identified within the project site, site controls shall be used to minimize the spread of infected plant and soil material. After controlled limbing, affected tree trimmings shall be segregated by the contractor for appropriate offsite disposal in coordination with the San Francisco or Alameda County forester or authorized agricultural inspector. Soil removed in the immediate vicinity of the infected tree shall not be used in site restoration and may require disposal at a landfill.

**Impact BI-3: The project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Less than Significant with Mitigation)**

The project site supports the perennial aquatic community associated with Alameda Creek, which is both federally- and State-protected by the Corps as waters of the United States, subject to regulation under the Clean Water Act (CWA) Section 404, and the Regional Water Quality Control Board (RWQCB) as waters of the State, subject to regulation under the Porter Cologne Water Quality Control Act and the San Francisco Water Quality Control Plan. A preliminary delineation of waters of the U.S. revealed a total of 0.84 acre (575 linear feet) of potentially jurisdictional riverine “other waters” (including instream wetlands) and 116 linear feet of potential jurisdictional ephemeral drainage “other waters” occur within the project study area.

Both permanent and temporary placement of material (e.g., concrete forms, weirs, dewatering structures) in Alameda Creek would be considered fill within waters of the United States and would require CWA Section 404 authorization from the Corps and CWA Section 401 water quality certification/Porter Cologne Water Quality Control Act Report of Waste Discharge from the RWQCB. A Fish and Game Code Section 1602 lake and streambed authorization agreement (SAA) would also be required by CDFW for temporary and permanent alterations to the creek bed and bank.

Construction activities are anticipated to be conducted over 4 months during the dry season when creek water levels are low, with typical flows at less than 1 cubic foot per second through Little Yosemite. As Alameda Creek is a perennial feature, creek flow may be present in the dry season and water would be routed around the construction work areas by using a water diversion structure that may consist of stacked sandbags and a pipe around the work area. Water would be routed around the site using gravity flow. If necessary, water within the work sites would be pumped up to treatment tanks located in the parking area at the top of the slope. Treated water would be disposed of in accordance with State regulations and permit conditions, and may be used as irrigation water for developed areas of the Sunol Regional Wilderness.

Potential temporary impacts on water quality during construction could result from the release of hazardous construction-related materials (e.g., gasoline, oils, grease, lubricants, or other petroleum-based products) into Alameda Creek. As discussed in Section A, Subsection A.5, Environmental Control Measures During Construction, construction contractors would implement measures to minimize construction effects on water quality. These measures would include preparation and implementation of a SWPPP containing stormwater BMPs, and adherence to terms and conditions of the NMFS Incidental Take Permit regarding construction-period water quality protection. Each would reduce the project's potential impact on aquatic communities. In addition, implementation of Mitigation Measures M-BI-1a through M-BI-1e and **Mitigation Measure M-BI-3 (Minimization of Disturbance to Waters of the United States and Waters of the State)** would reduce temporary impacts to a less-than-significant level through worker environmental awareness training, the presence of an onsite biological monitor during construction, installation of exclusion fencing, implementation of general construction measures, and minimization of disturbance to waters of the United States and waters of the state.

**Mitigation Measure M-BI-3: Minimization of Disturbance to Waters of the United States and Waters of the State.**

The SFPUC and its contractors shall minimize impacts on waters of the United States and waters of the state by implementing the following measures:

- Avoid construction activities in saturated or ponded streams (typically during the spring and winter) to the maximum extent feasible. Where water features must be disturbed in support of the project, the minimum area of disturbance necessary for construction shall be identified, and the area outside of that shall be avoided.
- Stabilize exposed slopes and streambanks immediately upon completion of construction activities (e.g., removal of the temporary wooden stairways).
- During construction, implement measures to catch trimmed tree limbs, shrubs, debris, soils, and other construction materials created by or used in vegetation removal before such materials can enter the waterway. Immediately remove materials that are inadvertently deposited below the ordinary high water mark (OHWM) of Alameda Creek in a manner that minimizes disturbance of the drainage bed and bank. Such materials shall be placed either in soil stockpiles or an appropriately managed waste collection container until the materials can be properly disposed of.

**Impact BI-4: The project could interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant with Mitigation)**

**Fish**

Fish species identified in the Upper Alameda Creek watershed are resident rainbow trout and California roach upstream of Little Yosemite and those species plus Sacramento sucker, Sacramento pikeminnow, prickly sculpin, and Pacific lamprey downstream of Little Yosemite. Except for the Pacific lamprey, none

of these species is anadromous, but can move up and downstream within the river system for purposes of feeding, growth, and reproduction. Existing migration passage conditions in Little Yosemite already limits the upstream distribution of several of the species, and the implementation of this project could improve access in the future. During construction, which would occur during the low-flow summer season, access past each construction site would be temporarily restricted by dewatering and diversion of the flow around the site in a pipe. This restriction would temporarily prevent any upstream and downstream movement but is expected to be very short term and localized over a period of 4 months and completed during the dry season (typically understood to end by October 15), so it would not substantially affect native fishes and the impact would be less than significant.

### Wildlife

Temporary and permanent impacts on California red-legged frog, foothill yellow-legged frog, and western pond turtle and their aquatic habitat would result from installation of the concrete weirs within Alameda Creek. Project construction would temporarily dewater portions of the stream channel that could be used for movement of these species within waters of Alameda Creek. Species would still be permitted to move through dry portions of the channel during construction, and implementing Mitigation Measures M-BI-a through M-BI-1d, described above, and **Mitigation Measure M-BI-4 (Fish and Amphibian Exclusion, Rescue and Removal from Dewatered Work Areas)**, would minimize adverse impacts on these species throughout the duration of the project. Following construction, all areas of temporary disturbance would be restored to pre-project conditions allowing species movement through the creek channel waters. Deeper pools resulting from the installation of the concrete weirs within the creek could be used by California red-legged frog, foothill yellow-legged frog, and western pond turtle for foraging or refuge from predators which would still constitute suitable habitat for these species. Therefore, post-project conditions within Alameda Creek are not expected to prohibit the movement of wildlife species within the creek channel or result in decreased habitat conditions, and impacts on these species would be less than significant.

Suitable foraging and nesting habitat for resident and migrating birds as well as suitable roosting habitat for bats occurs within the project area. Construction activities could adversely affect nesting birds and roosting bats within the project area by direct injury or mortality to individuals, removing active nests, and trimming trees or removing rocks supporting roosting bats would be considered a significant impact. Implementing Mitigation Measures M-BI-1f and M-BI-1g would reduce these impacts to a less-than-significant level.

While the restricted movement of resident fish and wildlife during project construction may be temporary and determined to be less than significant, dewatering work areas within Alameda Creek

around Features 9, 10, and 11 could have direct adverse effects on resident fish and amphibians, including the California species of special concern foothill-yellow-legged frog, which remain in the shallow pools and low-flowing water at the time of construction. Implementing Mitigation Measure M-BI-4 (Fish and Amphibian Exclusion, Rescue and Removal from Dewatered Work Areas) would reduce the impact on local fish species to a less-than-significant level by removing these species from project areas to be dewatered.

**Mitigation Measure M1-BI-4: Fish and Amphibian Exclusion, Rescue and Removal from Dewatered Work Areas.**

Prior to dewatering the work areas within Alameda Creek, fish exclusion netting shall be installed by a qualified fish biologist both upstream and downstream to isolate the work area. To identify and relocate amphibians, a qualified biologist shall perform a visual encounter survey of the work area within 24 hours of dewatering. Amphibians shall be captured by hand or aquatic dip and relocated to suitable off-site habitat. Fish shall be removed from the project work sites by a qualified fish biologist using approved methods in accordance with the NMFS Biological Opinion (BO) for the Calaveras Dam Replacement Project (CDRP). Acceptable methods for removing fish during dewatering of the project sites within Alameda Creek include electrofishing, rotary screw trap, pipe-trap, or fyke-net trap. Construction dewatering shall also occur in accordance with conditions of the NMFS BO and standard best practices and under the supervision of a qualified biologist. Concrete pours are required to be done in the dry and allowed to cure for 7 days following each pour. Therefore, the three sites corresponding to Features 9, 10, and 11 shall be dewatered and dried during construction and curing of the concrete. All fish and amphibians shall be removed from the sites that are dewatered prior to completely dewatering the stream segments. Rescued fish and amphibians shall be relocated to nearby suitable habitat that has been agreed to with the regulatory agencies.

**Impact BI-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (No Impact)**

The Alameda County Tree Ordinance applies only to the county right-of-way. No trees are anticipated to be removed under the proposed project. None of the trees to be trimmed as a part of the project is located within the county right-of-way. Therefore, no impacts would occur.

**Impact BI-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (Less than Significant)**

**SFPUC Alameda Watershed Habitat Conservation Plan**

The SFPUC Alameda Watershed Habitat Conservation Plan (HCP) is currently in draft form and not yet finalized as an HCP. The purpose of an HCP is to comply with federal ESA and the CESA and provide coordinated mitigation of impacts on natural resources and conservation planning within the watershed. Measures to protect special-status species with potential to occur in the project site would be included in

this HCP. As the Alameda Watershed HCP has not been adopted, it would not apply to the project and no conflict would result from project implementation. Further, Mitigation Measures M-BI-1a through M-BI-1i, M-BI-2, M-BI-3, and M-BI-4, as described above, would ensure that the proposed project would have less-than-significant impacts on natural resources within the watershed that may be the subject of the HCP.

#### East Alameda County Conservation Strategy

The project is located within the planning area for the East Alameda County Conservation Strategy (EACCS). The EACCS is a joint effort among several local, State, and federal agencies intended to provide an effective framework to protect, enhance and restore natural resources in eastern Alameda County while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development projects. The EACCS is focused on biological resources impacts, such as those on endangered and other special-status species, and sensitive habitat types (e.g., wetlands, riparian corridors, rare upland communities). The EACCS will enable local projects to comply with State and federal regulatory requirements within a framework of comprehensive conservation goals and objectives, and to be implemented using consistent and standardized mitigation requirements. By implementing the EACCS, local agencies can more easily address the legal requirements relevant to these species. The EACCS will not result in permits, but rather will serve as guidance for project-level permits, and the federal and State resource agencies are participating in the development of the EACCS with the intent that it becomes the blueprint for all mitigation and conservation in the study area.

The EACCS study area encompasses 271,485 acres, or approximately 52 percent of Alameda County, including the cities of Dublin, Livermore, and Pleasanton. The western boundary of the study area runs along the Alameda Creek watershed and the northern, southern, and eastern boundaries follow the Alameda County line with its adjacent counties. The EACCS study area includes the watershed lands in the Alameda Creek watershed. The EACCS study area has been divided into 18 discrete units, or conservation zones, to identify locations for conservation actions in areas with the same relative ecological function as those areas where impacts occur. The Little Yosemite Fish Passage Project is located in Conservation Zone 17.

The overall conservation priorities for Conservation Zone 17, and the proposed project's general compliance with these strategies, are as follows:

- *Protect serpentine bunchgrass grassland cover:* Non-native grassland is present within the project site, however no serpentine vegetation communities occur within the project area.
- *Protect critical habitat and recovery unit habitat for Alameda whipsnake:* The proposed project is located within critical habitat for Alameda whipsnake. Avoidance and minimization measures for impacts on individuals and habitat would be implemented as part of the project, and habitat

restoration and enhancement would occur under the Habitat Restoration Plan as mitigation for temporary disturbance during construction (see Mitigation Measure M-BI-1e).

- *Protection of riparian habitat along Alameda Creek to support foothill yellow-legged frog, Alameda whipsnake, and central California coast steelhead:* All project personnel would attend an environmental training program on biological resources within the project site and corresponding permit restrictions (see Mitigation Measure M-BI-1a). Best management practices (BMPs) would be installed between staging areas and equipment and Alameda Creek as part of the project SWPPP (see Mitigation Measures M-BI-1d and M-BI-3). Disturbed areas would be restored and enhanced where disturbed under the project through the Habitat Restoration Plan (see Mitigation Measure M-BI-1e).
- *Protection of golden eagle nesting habitat, with surveys to determine if previously identified nests are still active:* Pre-construction nesting bird surveys would be conducted in advance of project construction to identify active or potentially active raptor and passerine nests within the project vicinity. Active nests would be buffered from project activities until fledging is complete (see Mitigation Measure M-BI-1f).
- *Protection of critical habitat for California red-legged frog:* The proposed project is located within critical habitat for California red-legged frog. Avoidance and minimization measures for impacts on individuals and habitat would be implemented as part of the project, and habitat restoration and enhancement would occur under the Habitat Restoration Plan as mitigation for temporary disturbance during construction (see Mitigation Measure M-BI-1e).
- *Protection of contiguous patches of mixed evergreen forest/oak woodland and sycamore alluvial land covers:* The proposed project would not disrupt contiguous patches of oak woodland, which occur within and surrounding the project site. No tree removal is planned under the proposed project, and tree protection measures would be implemented during construction (see Mitigation Measure M-BI-2).
- *Complete surveys in annual grassland habitat for Callippe silverspot butterfly larval host /food plants and map occurrences of plant populations:* Non-native grassland occurs within the project site, but the Callippe silverspot butterfly host plant, Johnny jump-up (*Viola pedunculata*), is not known to areas that would be affected by the proposed project.

Since the EACCS is not yet an adopted or approved plan, the final draft conservation strategies do not apply to the project. Mitigation Measures M-BI-1a through M-BI-1i, M-BI-2, M-BI-3, and M-BI-4 proposed above to avoid and minimize impacts on special-status species and sensitive resources are consistent with those that are put forth in the conservation strategy and would likely be in compliance with the intent and purpose of the EACCS. Therefore impacts would be less than significant.

**Impact C-BI: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in significant cumulative impacts on biological resources. (Less than Significant with Mitigation)**

This analysis evaluates whether the impacts of the project, together with the impacts of the cumulative projects, would result in cumulatively significant impacts on special-status species or other biological resources protected by federal, State, or local regulations or policies (based on the significance criteria and



thresholds presented earlier). The geographic context for the analysis of cumulative impacts on biological resources encompasses biologically linked areas (e.g., by watershed or bird movement), ecologically similar areas throughout the Sunol Valley (i.e., open space areas), or projects that would overlap geographically (e.g., truck routes). The analysis of potential cumulative impacts on biological resources considers projects listed in Table 3 and shown in Figure 6.

Projects considered in this cumulative analysis would affect habitats similar to those in the project site, including oak woodland, California sycamore riparian, California sagebrush scrub, non-native grassland, and perennial creeks – and specifically Alameda Creek. Impacts on biological resources associated with the project include 1) possible direct impacts on individual special-status wildlife species including California tiger salamander, California red-legged frog, Alameda whipsnake, foothill yellow-legged frog, coast horned lizard, western pond turtle, special-status and migratory birds, special-status bats, San Francisco dusky-footed woodrat, and ringtail, and the special-status plant species big tarweed and Santa Clara red ribbons; 2) indirect impacts through temporary and/or permanent habitat modification; and 3) direct and indirect impacts on aquatic habitats and waters of the United States and state.

Specific projects that would affect the same geographic areas, habitats, species, or waterways as the proposed project include the Calaveras Dam Replacement Project (CDRP), Camp Ohlone Road Dust Control Project, Alameda Creek Diversion Dam Fish Passage Project, Alameda Creek Recapture Project, San Antonio Back Pipeline, SMP-30 Quarry Expansion and Cutoff Wall, Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir, and Alameda Creek Bridge Replacement and Niles Canyon Medium Term Projects. Many of these projects would include temporary construction-related impacts on biological resources, while others would also have long-term operational impacts on similar species, representing a potentially significant cumulative impact.<sup>125, 126, 127, 128, 129</sup>

Few of the current and reasonably foreseeable cumulative projects that could result in significant cumulative construction impacts on biological resources are those that would have long-term or operational adverse impacts on special-status species, sensitive habitats, or aquatic resources. These

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<sup>125</sup> Alameda County Water District, 2014a. Alameda County Water District, Current Fish Passage & Related Projects. Available at <http://www.acwd.org/index.aspx?NID=456> and accessed on May 2, 2014.

<sup>126</sup> Alameda County Water District, 2014b. Alameda County Water District, Completed Fish Passage & Related Projects. Available at <http://www.acwd.org/index.aspx?NID=436> and accessed on May 2, 2014.

<sup>127</sup> San Francisco Planning Department, 2012. *Final Environmental Impact Report for the San Francisco Public Utilities Commission San Antonio Backup Pipeline Project*, San Francisco Planning Department File No. 2007.0039E, State Clearinghouse No. 2007102030. September.

<sup>128</sup> RMC Water and Environment, 2006. Zone 7 Stream Management Master Plan. August.

<sup>129</sup> Zone 7 Water Agency, 2013. Arroyo Mocho Stanley Reach Riparian Restoration and Channel Enhancement Project, Livermore, California, Final Environmental Initial Study/Mitigated Negative Declaration. March.

projects include the CDRP, Alameda Creek Recapture Project, San Antonio Backup Pipeline, SVWPT Expansion and Treated Water Reservoir, and SMP-30 Quarry Expansion and Cutoff Wall.

Not all projects listed in Table 3 and shown in Figure 6 would affect biological resources. Several of those projects, such as the Camp Ohlone Road Dust Control Project, would be limited to short-term or temporary impacts associated with construction disturbance, while others would result in a cumulative benefit to biological resources. Projects such as the Alameda Creek Diversion Dam Fish Passage, Alameda Creek Fish Passage and Water Supply Reliability Improvement Projects, Arroyo Mocho Stanley Reach Restoration Project, PG&E Gas Pipeline Crossing, and Zone 7 Water Agency Stream Management Master Plan Improvements would include elements tailored to improving the Alameda Creek watershed to facilitate fish passage and restore steelhead to the creek, which would result in a cumulative benefit to biological resources. Restoration elements would be required conditions of these projects for affected special-status species habitat either in the project area of disturbance or on mitigation lands within the watershed as relevant compensation for local special-status plants, invertebrates, amphibians, reptiles, birds, and mammals.

The contribution of the Little Yosemite Fish Passage Project within Alameda Creek to cumulative biological resources impacts resulting from other potential projects in the vicinity could be cumulatively considerable due the similar temporary, construction-related potential impacts on special-status species, sensitive natural communities, or local waterways that have the potential to occur throughout construction of the project. Implementation of Mitigation Measures M-BI-1a through M-BI-1i, M-BI-2, M-BI-3, and M-BI-4, as outlined above, would avoid or substantially minimize the project's effect on special-status species, sensitive natural communities, and waters of the United States and state, and therefore would reduce the project's contribution to cumulative impacts on biological resources to a less-than-significant level. Operational impacts of the Little Yosemite Fish Passage Project would be cumulatively beneficial to local aquatic species due to the expected outcome of the project removal of physical barriers to steelhead passage and the creation of deeper pools to encourage spawning. These features in turn would be beneficial to local fish and amphibians (e.g., California red-legged frog and foothill yellow-legged frog) that already use Alameda Creek for foraging and breeding.

## E.14 Geology and Soils

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>14. GEOLOGY AND SOILS—Would the project:</b>					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Change substantially the topography or any unique geologic or physical features of the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project would not build any structures or facilities and thus would not be adversely affected by expansive soil, and therefore Topic 14(d) is not applicable. The project would not include use septic tanks or alternative onsite wastewater disposal systems, and therefore Topic 14(e) is not applicable.

**Impact GE-1: The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving rupture of a known earthquake fault, seismic groundshaking, seismically induced ground failure, or landslides. (Less than Significant)**

### Fault Rupture

The Alquist-Priolo Earthquake Fault Zone for the Calaveras Fault is more than ½ mile west of the project site.<sup>130</sup> There are no earthquake fault zones or active or potentially active faults on or in the immediate vicinity of the site. Therefore, impacts related to fault rupture would be less than significant.

<sup>130</sup> California Department of Conservation, Division of Mines and Geology, 1982. State of California Special Studies Zones, La Costa Valley, Revised Official Map. January 1, 1982.

## Groundshaking

Based on shaking hazard mapping by the Association of Bay Area Governments, the project site could experience violent groundshaking in an earthquake on one of the regional faults.<sup>131,132</sup> However, the project does not include the construction of any new structures, and it would not increase the number of visitors to the site. Therefore, impacts related to groundshaking would be less than significant.

## Liquefaction, Lateral Spreading, and Earthquake-Induced Settlement

The project site is located in an area of low to moderate liquefaction potential identified by the United States Geological Survey.<sup>133</sup> Further, the project does not include the construction of any new structures and would not increase the number of visitors to the site that could be adversely affected by liquefaction and its related effects including lateral spreading and earthquake-induced settlement. Therefore, impacts related to liquefaction and its related effects would be less than significant.

## Earthquake-Induced Landslides

The project site is located in an area mapped by the United States Geological Survey as mostly landslides, which includes areas of mapped landslides with little intervening space between them.<sup>134</sup> In addition, the project area is located at the toe of a large landslide that has been active for at least several thousand years as discussed below in Impact GE-3. However, the project does not include the construction of any new structures and would not attract large<sup>135</sup> numbers of visitors to the site who could be adversely affected by landslides and their related effects. Further, the only ground-disturbing construction activities would be construction of trails and wooden stairways to provide access to the construction sites, and these activities would not destabilize the existing slopes along Alameda Creek. Therefore, impacts related to earthquake-induced landslides would be less than significant.

## **Impact GE-2: The project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)**

Construction within and adjacent to Alameda Creek for site access (trails and wooden stairs adjacent to the creek and construction platforms within the creek) could result in limited soil erosion discussed in

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<sup>131</sup> Association of Bay Area Governments, Hazard Maps, Alameda County Earthquake Hazard, Alameda County Hazard Map. <http://quake.abag.ca.gov/earthquakes/Alameda/>. Accessed June 16, 2014.

<sup>132</sup> Shaking hazard maps provided by the Association of Bay Area Governments show likely shaking intensity in any 50-year period from all possible faults. It is the equivalent risk to a 500-year flood. The Association of Bay Area Governments selected this interval because it most closely aligns to the levels of shaking the current building code is designed to withstand.

<sup>133</sup> United States Geological Survey, *Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California, Map of Liquefaction Susceptibility*, Open File Report 06-1037. 2006.

<sup>134</sup> United States Geological Survey, *Summary Distribution of Slides and Earth Flows in Alameda County, California*. Open File Report 97-745C. 1997.

<sup>135</sup> URS Corporation, 2013. Conceptual Engineering Report, Fish Passage at the Little Yosemite Reach of Alameda Creek. July 2013, updated August 2013.

Section E.15, Hydrology and Water Quality (Impact HY-1). However, because the construction and staging areas for the project would disturb more than 1 acre of land, the construction contractor for the project would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would identify best management practices (BMPs) for the management and control of erosion and sediment, among other potential stormwater pollutants, during construction. The SFPUC has also developed a list of standard construction BMPs that are designed to prevent erosion and other types of environmental impacts at the site. The types of BMPs that could be implemented for erosion control include straw bales and silt fences, minimizing vegetation removal, and stabilizing and revegetating disturbed areas as soon as possible. With implementation of these BMPs in conformance with the SWPPP and SFPUC construction specifications, impacts related to erosion during construction would be less than significant.

At the completion of construction, the wooden stairs and construction platforms would be removed, and the construction sites would be restored to their approximate pre-construction condition. As described in Section A, Project Description, minimal operation and maintenance activities such as infrequent inspections would be conducted once the project is constructed. Although some restoration and reparations could be required, most of the work would be confined to the creek bed. Such inspection and maintenance activities would not be expected to cause substantial soil erosion. Therefore, there would be a less-than-significant impact related to soil erosion once the project is constructed.

Topsoil is a fertile soil horizon that typically contains a seed base. The proposed project primarily includes construction within Alameda Creek. There would be no substantial grading under the proposed project that would involve the removal of topsoil. Therefore, there is no impact related to the loss of topsoil.

**Impact GE-3: The project would be located on geologic unit or soil that is unstable, or that could become unstable as a result of the project, and could result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant with Mitigation)**

As described in Impact GE-1, the project site is located in an area mapped by the United States Geological Survey as mostly landslides, which includes areas of mapped landslides with little intervening space between them.<sup>136</sup> In addition, the project site is located at the toe of a large landslide that has been active for at least several thousand years.<sup>137</sup> The landslide extends upslope to the north, with the top of the landslide located near the crest of the ridge; the large boulders in Little Yosemite canyon are the eroded

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<sup>136</sup>United States Geological Survey, *Summary Distribution of Slides and Earth Flows in Alameda County, California*. Open File Report 97-745C. 1997.

<sup>137</sup>URS Corporation, 2013. Conceptual Engineering Report, Fish Passage at the Little Yosemite Reach of Alameda Creek. July 2013, updated August 2013.

remnants of the landslide. Soil and smaller rocks of the slide mass have been eroded by Alameda Creek. All of the fish passage impediments identified in Little Yosemite are best classified as boulder jams, with one or more keystone boulders initiating the jam and providing stability. If the boulder jams become destabilized, the outcome is unknown.

**Construction:** The project is designed to avoid actions that have a substantial risk of destabilizing the boulder jams and the keystone boulders forming them. Excavation for construction of the concrete weirs would be conducted by hand and limited to depths of 5 feet and less. Removal of rock would be limited to removal of small boulders to expose a suitable rock subgrade for anchoring the weirs and deepen some pools. Limited "boulder breaking" would be conducted to obtain a desired shape on adjacent boulders where the weirs would be constructed, but large keystone boulders would not be removed. In addition, each weir would be formed as a single concrete structure spanned with steel reinforcement and shaped to conform to the face of the adjoining boulder or bedrock; then anchored to the channel bed and adjacent boulders or bedrock with rebar doveled and epoxied into the existing rock. These features are designed to maintain the stability of the boulder jams.

However, small rock falls have been identified on the north side of Feature 11,<sup>138</sup> and these could become destabilized during construction. Therefore, impacts related to construction on geologic units that could become unstable as a result of the project would be potentially significant. Implementation of Mitigation Measure M-GE-3, however, would require the SFPUC to provide flagging, signage or fencing, as appropriate, to ensure workers avoid any areas with rockfall hazard. With implementation of this mitigation measure, construction impacts related to unstable geologic units, lateral spreading, subsidence, and collapse would be reduced to a less-than-significant level.

**Operation:** Changing the hydraulics within the channel could cause unanticipated scour and channel changes that could affect stability of the boulder jams once constructed. However, as discussed in Impact HY-3 (Section E.15, Hydrology and Water Quality), the project would have no effect on the volume of flow in the creek and any change in the center of the flow path of the creek at the project site would be too small to have an adverse effect on erosion rates or scour. Therefore, changes in flow patterns would not likely destabilize the boulder jams.

While there remain some uncertainties about the large boulders shifting once the improvements are constructed, which could compromise the anchor points for the concrete weirs and potentially cause them to fail before their 20 to 30 year design life, the proposed design has been developed to provide

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<sup>138</sup> URS Corporation, 2013. Conceptual Engineering Report, Fish Passage at the Little Yosemite Reach of Alameda Creek. July 2013, updated August 2013.

reasonable structural stability and minimize the potential for failure and destabilization of the Alameda Creek channel and adjacent slopes. Further, as discussed in the Project Description, the SFPUC would periodically inspect the structures to evaluate their function and structural stability and identify whether any conditions may require maintenance or repair. The inspections would observe for conditions such as shifting of adjacent boulders; formation of gaps or leaks between the rock and concrete surface; cracking or spalling (splitting caused by weathering) of the concrete; excessive wear of the concrete surface and exposure of reinforcing steel; and flow piping around or under the weirs caused by scour of the channel bed or shifting of adjacent boulders. Any noted conditions that could contribute to instability of the weirs would be corrected. With implementation of these inspections, and repair of any conditions that could contribute to instability, operational impacts associated with unstable geologic units, lateral spreading, subsidence, and collapse would be less than significant.

**Mitigation Measure M-GE-3: Rockfall Hazard Prevention during Construction.**

The SFPUC shall provide flagging, signage or fencing, as appropriate, to ensure that workers avoid areas of known rock falls to the north of Feature 11 during construction.

The only ground-disturbing construction activities other than construction of the concrete weirs would include construction of wooden stairways and platforms to provide access to the construction sites, and work within Alameda Creek, and these activities would not destabilize the existing slopes along Alameda Creek. Therefore, impacts related to landslides would be less than significant.

**Impact GE-4: The project would not change substantially the topography or any unique geologic or physical features of the site. (Less than Significant)**

There are no designated unique geologic or physical features within Little Yosemite. While the project includes constructing concrete weirs shaped like natural boulders or bedrock, the proposed improvements would not substantially alter the physical characteristics of Little Yosemite that draw people to the site (e.g., the area's dense riparian vegetation, giant boulder assemblages, and cascading waterfalls and pools). The proposed physical changes to the creek channel's geomorphology would improve upstream passage conditions for adult steelhead, which would be an overall environmental benefit. Therefore, impacts related to alteration of topography would be less than significant.

**Impact C-GE: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to cumulative impacts related to geologic hazards. (Less than Significant)**

The entire Bay Area is in a seismically active region with a high risk of seismic hazards and a wide variety of geologic conditions. Nevertheless, the geographic scope of potential geology and soils impacts



is restricted to the project site and immediate vicinity because related risks are relatively localized or even site-specific.

Although the Camp Ohlone Road Dust Control Project and Alameda Creek Diversion Dam (ACDD) Project involve work areas that would overlap with those of the proposed project, none of the cumulative projects listed in Table 3 involve construction in the immediate vicinity of the project site. Therefore, cumulative impacts related to seismic hazards including fault rupture, groundshaking, liquefaction and related effects, and seismically induced landslides (discussed in Impact GE-1); erosion (discussed in Impact GE-2); unstable geologic units (discussed in Impact GE-3 and mitigated with implementation of Mitigation Measure M-GE-3); and alteration of topography (discussed in Impact GE-4) would be less than significant.

## E.15 Hydrology and Water Quality

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>15. HYDROLOGY AND WATER QUALITY— Would the project:</b>					
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>15. HYDROLOGY AND WATER QUALITY— Would the project:</b>					
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Impact HY-1: The project would not violate any water quality standards or waste discharge requirements. (Less than Significant)**

**Operation**

Operation of the project would not involve the discharge of any substance into Alameda Creek. Consequently, it would not alter water quality in the creek and therefore could not cause a violation of any water quality standards.

**Construction**

**Best Management Practices.** Construction of the project could potentially result in the discharge of sediment or construction materials into Alameda Creek or tributary drainages at the project site itself and at the construction staging areas. Stormwater discharges from construction sites are regulated under the federal Clean Water Act. The Clean Water Act requires that discharges to the waters of the United States be permitted under the National Pollutant Discharge Elimination System (NPDES). In California, stormwater discharges from construction sites must comply with the conditions contained in the State Water Resources Control Board’s NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

The State’s general permit requires that projects that disturb 1 acre or more of land must develop and implement a Storm Water Pollution Prevention Plan (SWPPP). Because the construction and staging areas for the project would disturb more than 1 acre of land, the construction contractor for the project would be required to prepare a SWPPP. The SWPPP must be prepared by a qualified SWPPP preparer and submitted to the Regional Water Quality Control Board, San Francisco Region, before construction begins. The SWPPP specifies the pollution control measures, referred to as best management practices, that must be implemented at the construction site. The types of best management practices and compliance monitoring required depend on the level of risk that a particular construction project poses to water quality. Projects are determined to be Level 1, Level 2, or Level 3 risks based on the susceptibility of

soils at the project site to erosion and the sensitivity of the water body. The project would pose at least a Level 2 risk because one of the designated beneficial uses of Alameda Creek is “COLD,” meaning uses of water that support cold water ecosystems. Consequently, monitoring would include checking the water quality of Alameda Creek for compliance with numerical standards for pH and turbidity.

In addition to the requirements that must be met to obtain compliance with the State’s general permit, the SFPUC has developed a list of standard construction measures that are designed to prevent erosion or other environmental impacts at construction sites. The standard measures would be included in the contract specifications for the construction of the project together with the requirement that the contractor maintain compliance with the State’s general permit. Discussed more fully in Section E.16, Hazards and Hazardous Materials, the Alameda Watershed Management Plan includes several actions related to the protection of surface water quality from hazardous materials leaks and spills. The project would be implemented in accordance with applicable provisions of the Alameda Watershed Management Plan.

**In-Stream Construction.** Construction of the project within the creek channel would involve cutting and moving some boulders and constructing concrete weirs. These activities could result in the discharge of sediment and the constituent materials of concrete into the creek if work was undertaken in a flowing stream. Cement is caustic and, if discharged to a water body, would increase the pH of the receiving water. The SFPUC would require the construction contractor to complete the work on the project during the summer months when the creek is likely to be dry. Whether or not the creek is dry at the commencement of construction, diversions would be built at the construction sites for Features 9, 10 and 11. The diversions would likely be built using materials such as sandbags and temporary piping, and would convey any stream flow around the construction sites so that all construction work could be undertaken in dry conditions. As noted in the Project Description, if necessary, nuisance water within the work sites would be pumped up to treatment tanks located in the parking area at the top of the slope. Treated water would be disposed of in accordance with State regulations and permit conditions, and may be used as irrigation water for developed areas of the Sunol Regional Wilderness. Consequently, there would be no discharge of sediment or other substances into flowing water of Alameda Creek from the sites of Features 9, 10 and 11 during construction. The first post-construction flow down the modified stream channel may mobilize sediment and other construction residues that remain at the sites of Features 9, 10 and 11. The amount of material that remains after construction clean-up would be small and its effects on water quality would be minor and transitory.

**Staging Areas.** During construction of the project, equipment and materials would be stored at three staging areas with a total area of 1.81 acres. The staging areas would all be within a few hundred feet of Alameda Creek and would drain to it should rainfall or spills occur. Construction is scheduled to occur entirely within the dry season so rainfall would be unlikely.

Construction materials and fuel could escape from the staging areas, wash into Alameda Creek, and degrade water quality if materials and fuel are not properly stored. Ground disturbance would occur at the staging areas as they are prepared and used by the construction contractor. Staging areas are typically prepared by clearing vegetation to reduce the possibility of fire and by removing topsoil to prevent vehicles and other heavy equipment from sinking into the ground. Some grading may be necessary to level the staging areas but it is expected to be minimal because the large staging area where most of the equipment and materials would be stored is fairly flat (see Table 1 for a summary of the extent of anticipated ground disturbance). Preparation and use of the staging areas may make soil surfaces vulnerable to erosion in the unlikely event that rainfall should occur and as construction vehicles enter and leave the staging areas. Implementation of best management practices in compliance with the State's construction general permit requirements and the SFPUC's own standard construction measures, and adherence to the Alameda Watershed Management Plan requirements, would be expected to prevent the discharge of stored construction materials to adjacent waterways and would minimize the discharge of eroded sediment and other pollutants from the staging areas.

**Conclusion.** The project would have a less-than-significant impact on water quality and would have a less-than-significant potential for violation of water quality standards or waste discharge requirements.

**Impact HY-2: The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). (No Impact)**

The project would be located in an area where Alameda Creek flows over bedrock. It is very unlikely that any significant groundwater recharge is occurring in the approximately 200 feet of stream that would be affected by the project, because sections of the streambed are impermeable rocks and where there are accumulations of permeable sediments they are underlain by rocks. Because the project would not affect groundwater recharge, it would also not affect local groundwater levels or, if they existed, any wells in the vicinity. Therefore, the project would have no impact on groundwater recharge or supplies.

**Impact HY-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. (Less than Significant)**

The stream channel between the Alameda Creek Diversion Dam and the Alameda Creek/Calaveras Creek confluence is rocky and descends at an average rate of 191 feet per mile, a gradient of 3.6 percent. It steepens as it flows through Little Yosemite, dropping about 200 feet in about one-quarter of a mile, a

gradient of 15 percent. When water is present in the Little Yosemite reach, the velocity of flow is rapid with water passing over waterfalls and through a series of chutes and pools.

The project would make alterations to the channel characteristics in three sections of the Little Yosemite reach of the creek referred to as Features 9, 10, and 11. The project would have no effect on the volume of flow in the creek, but it would affect the water surface elevation and velocity of flow. The total length of creek where the water surface elevation and velocity of flow might be altered would be about 200 feet. Features 9, 10 and 11 would alter the water surface elevation by a maximum of 2 or 3 feet. During small or moderate flow volumes, the velocity of flow in the vicinity of the weirs would be reduced compared to the existing condition. The reduction in velocity of flow combined with the creation of pools would improve the ability of fish to migrate through the creek channel. During large flow volumes, the weirs would have little or no effect on the velocity of flow. After the project is completed, water would flow down the Alameda Creek channel much as it does under the existing condition. The center of the flow path through the 200-foot-long section of the creek where the project would be built might be altered by a few feet from the existing center of the flow path, but this would have no effect on the overall drainage pattern.

The project would be located in a section of creek that flows over bedrock. There is little readily erodible material in the creek at the project site, because the channel is narrow and the velocity of flow during typical winter storms is sufficient to move downstream most silt, sand, or gravel that accumulates during low-flow periods. The project would have no effect on the volume of flow in the creek but it would reduce the velocity of flow in the vicinity of Features 9, 10 and 11 during small or moderate flow volumes. The project would have little or no effect on the velocity of flow during the large flow events that are responsible for most movement of silt, sand, and gravel. Any change in the center of the flow path of the creek or in the velocity of flow at the project site would be too small to have a substantial effect on erosion rates although small volumes of silt could become trapped behind the weirs that are part of the project. Therefore, the project would have a less-than-significant impact on existing drainage patterns of the site or area that would affect erosion or siltation.

**Impact HY-4: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. (No Impact)**

The project would not alter the existing drainage pattern. After the project is completed, water would flow down the Alameda Creek channel much as it does under the existing condition. The center of the flow path through the 200-foot-long section of the creek where the project would be built might be altered by a few feet from the existing center of the flow path, but this would have no effect on the overall

drainage pattern. Under the existing condition, flow in the creek is entirely contained within a rocky gorge, and it would continue to be contained within the gorge on completion of the project.

The project would not increase the area of impermeable surface. The modified rock and concrete features that make up the project are impermeable, as are the surfaces that they would replace. Because there would be no increase in impermeable surface, there would be no increase in the rate or volume of runoff produced from the project site and consequently no increase in downstream flood hazard. Therefore, the project would have no impact on existing drainage patterns of the site or area that would affect flood hazard.

**Impact HY-5: The project would not create or contribute runoff water which could exceed the capacity of existing or planned stormwater drainage systems or provide substantial addition sources of polluted runoff. (No Impact)**

As noted above (under Impact HY-4), the project would not increase the area of impermeable surface or the rate or volume of runoff produced from the project site. Furthermore, there are no engineered stormwater drainage systems at or near the site that could be affected by the project.

The quality of runoff from the project site would be the same after project completion as it is under the existing condition. Therefore, the project would have no impact associated with increased runoff.

**Impact HY-6: The project would not otherwise substantially degrade water quality. (Less than Significant)**

The impacts of the project on water quality are described under Impact HY-1 and they are judged to be less than significant. The project would have no other impacts on water quality other than those described in Impact HY-1.

**Impact HY-7: The project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Map or other authoritative flood hazard delineation map. (No Impact)**

Housing is not part of the project, and therefore the project would have no impact with respect to placement of housing within a 100-year flood area.

**Impact HY-8: The project would not place within a 100-year flood hazard area structures that would impede or redirect flood flows. (No Impact)**

The project is within the 100-year flood zone along Alameda Creek but it would not include features that would impede flood flows. The project would involve the cutting of rocks and the construction of weirs

at three locations within the Little Yosemite reach. The effect of the project would be to raise or lower the water surface elevation in the vicinity of the features by a maximum of about 3 feet. The sections of creek where the water surface elevation would be altered are discontinuous and would total about 200 linear feet. The change in water surface elevation would have no effect on flood hazard at the project site or downstream of it, and therefore, there would be no impact.

**Impact HY-9: The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. (No Impact)**

For the reasons noted in Impacts HY-5 and HY-8, the project would not increase flood hazard at the project site or downstream of it. The weirs that are part of the project are no more than 3 feet high, and water storage behind them would be minimal because they are located in a steep section of the stream channel. If the weirs failed, the amount of water that would be released downstream would be too small to have any effect on downstream flood hazard. Therefore, there would be no impact associated with risk of flooding.

**Impact HY-10: The project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (No Impact)**

Seiches are standing waves in enclosed or partially enclosed water bodies such as harbors, lakes, and bays. They can be caused by sudden changes in winds or atmospheric pressure, earthquakes, and landslides. A small-scale seiche occurs in a coffee cup when the cup is moved suddenly and the coffee slops from side to side. A tsunami is a wave in a sea or ocean produced by a large-scale disturbance, usually an earthquake or submarine landslide. The project would have no impact on the frequency of occurrence of seiches or tsunamis and would therefore have no effect on the exposure of structures or people to these phenomena.

The project would be built in a rocky canyon. No soils are present that, if they became saturated, would cause a mudflow. The project would have no impact on the frequency of occurrence of mudflows and would therefore have no effect on the exposure of structures or people to this phenomenon.

Therefore, there would be no impact associated with risk of inundation by seiche, tsunami, or mudflow.

**Impact C-HY: The project, in combination with past, present, and reasonably foreseeable future projects, would not result in cumulative hydrology and water quality impacts. (Less than Significant)**

Table 3 lists projects with potential to result in cumulative impacts when their impacts are considered together with the project's impacts. Only one project, the Calaveras Dam Replacement Project, affects hydrology and water quality in the reach of Alameda Creek that would be affected by the project.



When the Calaveras Dam Replacement Project, currently under construction, is completed, the average annual volume of water flowing down this reach of Alameda Creek will increase by about 10 percent compared to the existing condition. In addition to construction of a new Calaveras Dam, the Calaveras Dam Replacement Project includes modification of the existing Alameda Creek Diversion Dam so that when the gates to the diversion tunnel are open, some water can bypass the diversion dam and flow down the creek. The increase in flow in the reach of the creek below the diversion dam will primarily occur in drier years and is attributable to fish releases that will be implemented upon completion of the Calaveras Dam Replacement Project. The project would not increase the volume of flow in the Little Yosemite reach, so there would be no cumulative impact on flow.

Both the project and the Calaveras Dam Replacement Project would alter the water surface elevation in the Little Yosemite reach compared to the existing condition. The Calaveras Dam Replacement Project will increase the water surface elevation in the entire Little Yosemite reach by a few inches in the drier years and reduce it by a few inches in wetter years. The project would raise or lower the water surface elevation in the vicinity of the features by a maximum of about 3 feet. The sections of creek where the water surface elevation would be altered are discontinuous and would total about 200 linear feet. Because the Calaveras Dam Replacement Project will have only a small effect on water surface elevations, the cumulative impact of the two projects would be indistinguishable from the impact of the project alone. The change in water surface elevation attributable to operation of the project would have no impact on drainage patterns, erosion rates, stormwater runoff volumes and rates, or flood hazard, as described in Impacts HY-3, HY-4, and HY-9 above. Therefore, operation of the two projects would have no cumulative impact on these environmental elements.

The project and the Calaveras Dam Replacement Project could result in cumulative construction-period impacts. The project and the Alameda Creek Diversion Dam component of the Calaveras Dam Replacement Project would likely occur at the same time, and both could enable discharge of construction materials and eroded soil into Alameda Creek. However, both projects would have to implement best management practices to comply with the terms of the State's general permit for stormwater discharges from construction sites and with the SFPUC's standard construction measures. Overall, the construction-period impacts of the two projects would have a less-than-significant cumulative impact on water quality and hydrology.

## E.16 Hazards and Hazardous Materials

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less than Significant with Mitigation Incorporated</u>	<u>Less than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
<b>16. HAZARDS AND HAZARDOUS MATERIALS – Would the project:</b>					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 or within ¼ mile of an existing or proposed school. The nearest public airport or private airstrip to the project site is the Norman Y. Mineta San Jose International Airport, more than 8 miles to the southeast, and the project site is not within the airport's land use plan area. Project-related construction activities would not impair or interfere with implementation of an emergency response plan. Therefore Topics 16(c) through 16(g) are not applicable.

**Impact HZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less than Significant)**

Limited amounts of hazardous materials would be used during construction, including fuels, lubricants, and solvents associated with use and maintenance of construction equipment. Storage and use of

hazardous materials at staging areas could result in the accidental release of small quantities of hazardous materials, which could degrade soil and and/or surface water quality in Alameda Creek. However, as discussed in Section E.15, Hydrology and Water Quality (Impact HY-1), because the construction and staging areas for the project would disturb more than 1 acre of land, the construction contractor for the project would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would identify best management practices (BMPs) for the management and control of hazardous materials, among other potential stormwater pollutants, during construction. The types of BMPs that could be required include: maintaining an inventory of all hazardous materials stored onsite; storing chemicals in water-tight containers with appropriate secondary containment, or within a completely enclosed storage shed; implementing procedures that effectively address hazardous spills; developing a spill response plan; and maintaining personnel, materials, and equipment for spill cleanup at the construction site.

The following Alameda Watershed Management Plan management actions pertaining to hazards and hazardous materials would be applicable to the proposed project:

**Action Haz 4:** Conduct regular servicing for the SFPUC vehicle fleet and equipment so that leaks/drips/spills of contaminants are minimized. Guidelines include:

- Immediately report accidental spills of hazardous materials into surface waters to the Water Quality Bureau and the appropriate state agencies.
- Require that buckets and absorbent materials be carried in all SFPUC vehicles in case of an accident or breakdown in which vehicle-related fluids are released.
- Follow appropriate BMPs to minimize leaching of vehicle-related contaminants into the soil or groundwater from facilities.

**Action Haz 6:** Identify high-risk spill potential areas and implement measures (e.g., fines, barricades, etc.) to reduce the risk of hazardous spills.

**Action Haz 7:** Develop spill response and containment measures for SFPUC vehicles on the watershed. These measures should be coordinated with the overall Emergency Response Plan developed in Action Saf 7.

With implementation of BMPs in conformance with the SWPPP requirements and the hazardous materials management actions of the Alameda Watershed Management Plan, impacts from the use and storage of hazardous materials during construction would be less than significant.

The project would not include the construction of any new facilities that would use hazardous materials and therefore would have no impact related to the routine transport, use, or disposal of hazardous materials during operation.

**Impact HZ-2: The project would not 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)**

In 2001, the California Air Resources Board adopted the Asbestos Airborne Toxic Control Measure (Asbestos ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations in areas of serpentine<sup>139</sup> and other ultramafic rocks<sup>140</sup> (17 CCR 93105), which became effective in July 2002. The ATCM protects public health and the environment by requiring the use of best available dust mitigation measures to prevent the offsite migration of asbestos-containing dust from road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas of ultramafic rock, serpentine, or asbestos.<sup>141</sup> The Bay Area Air Quality Management District implements the regulation.

The geologic unit present in the project site vicinity is the Franciscan Melange of late Jurassic and/or early Cretaceous age and the Little Yosemite reach contains boulders of Franciscan blueschist and serpentinite.<sup>142,143</sup> Regionally, these ultramafic rock types are known to contain naturally occurring asbestos. However, chrysotile and amphibole asbestos were not detected in two recent samples of the boulders that would be chipped or cut during construction at Features 9 and 10.<sup>144</sup> No other sources of asbestos or other hazardous materials are expected to occur at the project site or would be expected to be released through a reasonably foreseeable upset. Accordingly, the project would not be expected to cause releases of naturally occurring asbestos and the Asbestos ATCM would not apply. The impact would, therefore, be less than significant.

**Impact HZ-3: The project would not expose people or structures to a significant risk of loss, injury, or death involving fires. (Less than Significant)**

The proposed project would include the use of several potential sources of ignition during construction, such as equipment with internal combustion engines, gasoline-powered tools, and equipment or tools that produce a spark, fire, or flame. Overheated brakes on wheeled equipment, heated emissions-control

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<sup>139</sup> Serpentine is a naturally occurring group of minerals that can be formed when ultramafic rocks are metamorphosed during uplift to the earth's surface. Serpentinite is a rock consisting of one or more serpentine minerals. This rock type is commonly associated with ultramafic rock along earthquake faults. Small amounts of chrysotile asbestos, a fibrous form of serpentine minerals, are common in serpentinite.

<sup>140</sup> Ultramafic rocks are formed in high-temperature environments well below the surface of the earth.

<sup>141</sup> Asbestos includes several types of naturally occurring fibrous materials found in many parts of California.

<sup>142</sup> United States Geological Survey (USGS), 1997. Open-File Report 97-744. General Distribution of Geologic Materials in the San Francisco Bay Region, California: A Digital Map Database. Compiled by Carl Wentworth. Available online at: <http://pubs.usgs.gov/of/1997/of97-744/>. Accessed on June 25, 2013.

<sup>143</sup> URS Corporation, 2013. Conceptual Engineering Report, Fish Passage at the Little Yosemite Reach of Alameda Creek. July 2013, updated August 2013.

<sup>144</sup> Asbestos TEM Laboratories, Inc. 2014. *Laboratory Report # 323943, Transmission electron microscopy analytical results for 2 bulk material sample(s), Job Site: Little Yosemite, Job No.: 26818785*. March 14, 2014.

devices or vehicles, friction from worn or unaligned belts and drive chains, and burned-out bearings or bushings on equipment can also be a potential source of ignition. Sparking as a result of scraping against rock is difficult to prevent. The other hazards result primarily from poor maintenance of the equipment. Smoking by construction personnel is also a potential source of ignition during construction.

The State Office of the Fire Marshal and California Department of Forestry and Fire Protection (CAL FIRE) administer State policies regarding wildland fire safety. CAL FIRE also provides firefighting personnel and equipment in response to wildland fires. The proposed project is in an area identified by CAL FIRE as a "High Fire Hazard Severity Zone" within a State Responsibility Area.<sup>145</sup> Therefore, construction activities would need to comply with California Public Resources Code (PRC) Division 4, Forest Forestry and Range and Forage Lands. PRC Division 4 includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on any piece of construction equipment that uses an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas.

In addition, project construction activities would be conducted in accordance with Action fir1 of the Alameda Watershed Management Plan, which requires SFPUC vehicles and equipment to comply with the fire prevention regulations established by CAL FIRE for use in the watershed, and non-SFPUC equipment to be certified by CAL FIRE. This action also requires all vehicles and equipment to include spark arrestors and to carry fire suppression equipment during the fire season.

Because the SFPUC's construction contractor(s) would implement the requirements of the PRC pertaining to fire safety in a high fire severity area as well as the SFPUC fire safety provisions of the Alameda Watershed Management Plan, impacts related to the risk of fire during construction would be less than significant.

At the completion of construction, minimal operation and maintenance activities such as infrequent inspections would be conducted, as described in Section A, Project Description. The inspections would not include activities that would increase fire danger in the project site vicinity beyond those described above. Therefore, impacts related to wildland fires would be less than significant during project operation.

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<sup>145</sup> California Department of Forestry and Fire Protection (CAL FIRE). 2007. Alameda County, Fire Hazard Severity Zones in SRA, adopted by CAL FIRE on November 7, 2007.

**Impact C-HZ: The project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts related to hazards and hazardous materials. (Less than Significant)**

The geographic scope for cumulative impacts associated with hazards and hazardous materials encompasses the project site and general vicinity, as described more specifically below.

Cumulative impacts related to the use of hazardous materials would occur where hazardous materials could be released to Alameda Creek or within the Alameda Creek watershed. Most of the projects listed in Table 3, particularly the nearby Calaveras Dam Replacement Projects, including the Camp Ohlone Road Dust Control and ACDD Projects, could result in a release of hazardous materials to Alameda Creek or within the watershed. However, cumulative impacts related to a release of hazardous materials would be less than significant because the proposed project and the other projects in the vicinity would be required to comply with their respective SWPPPs and/or SFPUC standard construction specifications for management of hazardous materials, as well as the hazardous materials policies of the Alameda Watershed Management Plan discussed in Impact HZ-1, which would minimize the potential for a release to occur and require prompt cleanup of any inadvertent release.

Cumulative impacts related to the risk of fire during construction would occur where projects would be constructed in the same fire hazard area. As discussed in Impact HZ-3, the project would be located in an area mapped by CAL FIRE as a "High Fire Hazard Severity Zone" within a State Responsibility Area. Of the projects listed in Table 3, the ACDD and Calaveras Dam Replacement Projects would be constructed in the same fire hazard zone and their construction schedules would overlap with the proposed project, and several other projects would also be located in the same fire hazard zone. However, the proposed project and each of these potential cumulative projects would be required to comply with the fire safety regulations of the PRC and the Alameda Watershed Management Plan fire protection action described in Impact HZ-3, which would reduce the potential for wildland fires during construction. Therefore, cumulative impacts related to fires would be less than significant.

## E.17 Mineral and Energy Resources

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>17. MINERAL AND ENERGY RESOURCES – Would the project:</b>					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project site is in an area that has not been classified for mineral deposit occurrence by the California Geological Survey (California Geological Survey, 1996);<sup>146</sup> the California State Mining and Geology Board gives priority of classification to areas within the State that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. As discussed in Section C, Compatibility with Existing Zoning and Plans, the East County Area Plan designates the project site as Water Management Land. While gravel quarries are an approved land use under this land use designation, the project would not include the construction of any permanent features that would prevent access to aggregate resources, and the area is not under severe threat of urban expansion. For these reasons, Topics 17(a) and 17(b) are not applicable to the project.

**Impact ME-1: The project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (Less than Significant)**

Construction of the project would require the use of fuels (primarily gasoline and diesel fuel) during the 4-month construction period. Compliance with applicable California Air Resources Board construction air quality regulations would reduce excessive idling and other inefficient operations. Only limited amounts of electricity would be used during construction. Water use would be limited to dust control and concrete production. Following construction, the proposed improvements would require periodic inspection and maintenance annually and following large storm events. The weirs would have an estimated 20- to 30-year design life, and therefore the fuel, water, and energy requirements associated with any required maintenance and repair activities would likely be minimal. Permanent electric power facilities or new lighting facilities would not be included as part of the project. For the above reasons, the project would

<sup>146</sup> California Geological Survey, 1996. Generalized Mineral Land Classification Map of the South San Francisco Bay Production-Consumption Region.



not result in substantial adverse effects related to the use of large amounts of fuel, electricity, or water or the use of these resources in a wasteful manner, and the impact would be less than significant.

**Impact C-ME: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative mineral and energy impacts. (Less than Significant)**

The geographic scope for potential cumulative impacts on energy resources encompasses the San Francisco Bay region. Similar to the proposed project, the cumulative projects identified in Table 3 would also require the use of fuel, water, and/or energy. These cumulative projects would also be required to comply with the California Green Building Standards Code, at a minimum, and would also be subject to local green building ordinances. The latter must be as stringent as the State requirements and are often more stringent. These building codes encourage sustainable construction practices related to planning and design, energy efficiency, and water efficiency and conservation. Compliance with these standards would be expected to reduce overall cumulative project energy demands. However, such demands may still be substantial. Given the size of the proposed project and its relatively small and temporary energy demands, the project would not be expected to make a cumulatively considerable contribution to regional energy impacts. Therefore, the effects of the proposed project, in combination with those of present and reasonably foreseeable projects in the region, would be less than significant with respect to wasteful use of energy resources.

## E.18 Agriculture and Forest Resources

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>18. AGRICULTURE AND FOREST RESOURCES:</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.					
<b>– Would the project:</b>					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less than Significant with Mitigation Incorporated</u>	<u>Less than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
<b>18. AGRICULTURE AND FOREST RESOURCES:</b>					
<b>—Would the project:</b>					
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is located entirely within SFPUC’s Alameda Creek watershed lands, in the Sunol Valley of unincorporated Alameda County. The Alameda County General Plan designates land in the vicinity of the project site for Parkland or Water Management uses. The project site is not located on land governed by a Williamson Act contract, as the land is owned by the City and County of San Francisco. As shown on the map *Alameda County Important Farmland 2012*,<sup>147</sup> the project site and surrounding non-submerged lands are mapped as Grazing Land. Neither the project site nor lands in its vicinity are zoned for forestry or timberland operations. No tree removal is proposed as part of the project and none is expected to result from project implementation. As the project would not convert existing land use and the project site carries none of the special agricultural or forestry resource protections identified in Topics 18(a) through 18(d), above, these criteria are not applicable to the project.

**Impact AF-1: The project would not involve other changes in the existing environment that could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)**

The project would not result in changes to the existing environment (for instance, by creating conflicting land uses or operational activities) that could indirectly cause the conversion of farmland to non-agricultural use or forest land to non-forest use. The project would have no impact with regard to this criterion.

**Impact C-AF: The project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not result in significant cumulative impacts on agricultural or forest resources. (No Impact)**

Implementation of the project would not contribute to cumulative impacts related to agricultural and forest resources because the project would not cause any project-specific impacts related to this resource topic.

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<sup>147</sup> California Department of Conservation, 2014. *Alameda County Important Farmland 2012* [map]. Map published April 2014.

## E.19 Mandatory Findings of Significance

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
<b>19. MANDATORY FINDINGS OF SIGNIFICANCE— Would the project:</b>					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that would be individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact MF-1: The proposed project could degrade the quality of the environment, reduce the habitat or otherwise adversely affect a rare or endangered plant or animal species. (Less than Significant with Mitigation)**

The discussion in Section E, Evaluation of Environmental Effects, identifies potentially significant impacts on the environment related to cultural resources, transportation, and biological resources. However, mitigation measures have been provided to address these potentially significant project-level impacts. Implementation of the mitigation measures would reduce the impacts to a less-than-significant level.

As discussed in Impact BI-1 in Section E.13, Biological Resources, project impacts on special-status wildlife (California tiger salamander, California red-legged frog, foothill yellow-legged frog, Alameda whipsnake, coastal horned lizard, western pond turtle, special-status nesting and migratory birds, special-status bats, San Francisco dusky-footed woodrat, and ringtail) would be reduced with implementation of **Mitigation Measures M-BI-1a (Worker Environmental Awareness Training), M-BI-1b (Onsite Biological Monitoring During Construction Activities); M-BI-1c (Species Exclusion Fencing), M-BI-1d (General Mitigation Measures during Construction); M-BI-1e (Avoidance, Minimization, and Habitat Restoration and Enhancement Measures for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake); M-BI-1f (Nesting Bird Protection Measures);**

**M-BI-1g (Avoidance and Minimization Measures for Special-Status Bats); M-BI-1h (Avoidance and Minimization Measures for San Francisco Dusky-Footed Woodrat, and M-BI-i (Avoidance and Minimization Measures for Ringtail).** In addition, impacts on sensitive natural communities would be reduced to a less than significant level through implementation of the above listed Mitigation Measures M-BI-1a through M-BI-1e, **and Mitigation Measure M-BI-2 (Avoidance and Minimization Measures for Native Trees).** Impacts on federally protected waters would be reduced to a less than significant level through implementation of the above-listed Mitigation Measures M-BI-1a through M-BI-1e, and M-BI-3 **(Minimization of Disturbance to Waters of the United States and Waters of the State).** Impacts on the movement of fish and wildlife through the Alameda Creek corridor would be reduced to a less than significant level through implementation of the above-listed Mitigation Measures Mitigation Measures M-BI-1a through M-BI-1d, and **Mitigation Measure M-BI-4 (Fish and Amphibian Exclusion, Rescue and Removal from Dewatered Work Areas).** In summary, impacts related to reducing the number or restricting the range of a rare or endangered plant or animal would be less than significant with mitigation.

**Impact MF-2: The proposed project could eliminate important examples of the major periods of California history or prehistory. (Less than Significant with Mitigation)**

As discussed in Impacts CP-2 and CP-4, construction activities associated with the proposed project could result in potential impacts on unknown archaeological resources paleontological resources, and human remains. These impacts would be less than significant with implementation of **M-CP-2 (Accidental Discovery of Archaeological Resources) and M-CP-4 (Unanticipated Discovery Measures for Human Remains).** Therefore, impacts related to elimination of important examples of California history or prehistory are less than significant with mitigation.

**Impact MF-3: The proposed project could have impacts that would be individually limited, but cumulatively considerable. (Less than Significant with Mitigation)**

Section 15130 of the State CEQA Guidelines requires a reasonable analysis of the significant cumulative impacts of a proposed project. *Cumulative impact* refers to “two or more individual effects that, when considered together, are considerable or able to compound or increase other environmental impacts.” The individual effects may be changes resulting from a single project or an increase in the number of environmental impacts. The cumulative impact is the change in the environment that results when the incremental impact of the project is added to closely related past, present, or reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects that take place over a period of time (CEQA Guidelines Section 15355 (a)(b)).

For the purposes of this initial study, the geographic context for the proposed project's cumulative impact assessment is generally the Sunol Regional Wilderness area, although an expanded geographic context was considered for some topics. Recently approved and reasonably foreseeable projects and planning efforts in the vicinity of the project site are presented in Table 3.

This initial study determined that the proposed project would have no impact or is not applicable for the following issues: population and housing, wind and shadow; public services, and agriculture. Therefore, the proposed project would not contribute to cumulative impacts related to these issue areas.

The assessment of potential cumulative impacts for the remaining environmental issue areas is provided in the relevant subsections of Section E, Evaluation of Environmental Effects. However, for the reasons described in Sections E.1 through E.18, with implementation of mitigation measures to address the potential for significant project-level impacts, the proposed project's contribution to all cumulative impacts on the environment would not be cumulatively considerable (less than significant with mitigation).

**Impact MF-4: The proposed project could have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. (Less than Significant with Mitigation)**

The discussion in Section E, Evaluation of Environmental Effects, identifies potentially significant impacts related to cultural resources, transportation, biological resources, and geology and soils. Of these, impacts related to transportation and geologic resources could adversely affect human beings. Mitigation measures have been provided in this initial study to reduce these potentially significant project-level impacts to a less-than-significant level. No project-level significant impacts were identified for the following environmental issue areas: land use; aesthetics; noise, wind and shadow; population and housing; air quality, greenhouse gases; recreation; utilities and service systems; public services; hydrology and water quality; hazards and hazardous materials; mineral and energy resources; and, agricultural and forest resources. Therefore, with implementation of the mitigation measures specified in Sections E.1 through E.18, the proposed project would not result in substantial adverse effects, direct or indirect, on human beings (less than significant with mitigation).

## F. MITIGATION MEASURES

The following mitigation measures have been adopted by the project sponsor and are necessary to avoid potential significant impacts of the proposed project.

### **Mitigation Measure M-CP-2: Accidental Discovery of Archeological Resources.**

The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in CEQA Guidelines Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor; or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant, based on standards developed by the Planning Department archeologist. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological consultant 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 project sponsor.

Measures might include: preservation in situ of the archeological resource; an archeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey

Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

**Mitigation Measure M-CP-4: Accidental Discovery of Human Remains.**

The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activities shall comply with applicable state laws. This shall include immediate notification of the Alameda County coroner and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission, which shall appoint a most likely descendant (MLD) (Public Resources Code Section 5097.98). The archeological consultant, San Francisco Public Utilities Commission (SFPUC), and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (California Environmental Quality Act [CEQA] Guidelines Section 15064.5[d]). The agreement shall 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 Public Resources Code allows 24 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the SFPUC shall follow Public Resources Code Section 5097.98(b), 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."

**Mitigation Measure M-C-TR: Traffic Control Plan.**

The SFPUC or its contractor(s) shall prepare and implement a traffic control plan. The plan shall conform to the State's *Manual of Traffic Controls for Construction and Maintenance Work Areas*,<sup>148</sup> where applicable. Elements of the traffic control plan shall include, but not be limited to, the following:

- Advance warning signs shall be installed on Geary Road advising motorists, bicyclists, and pedestrians of the presence of construction vehicles in order to minimize hazards associated with construction activities immediately adjacent to Geary Road, including the entry and egress of project-related construction vehicles.
- Pedestrian and bicycle access and circulation shall be maintained during project construction where it is safe to do so.
- A public information program shall be developed and implemented to advise motorists, bicyclists, and nearby property owners of the impending construction activities (e.g., media coverage, direct distribution of flyers to affected properties, email notices, portable message signs, and informational signs).

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<sup>148</sup>California Department of Transportation (Caltrans), 2014. California Manual on Uniform Traffic Control Devices for Streets and Highways: Part 6 Temporary Traffic Controls, 2012 Edition. Online at <http://www.dot.ca.gov/hq/traffops/engineering/control-devices/trafficmanual-current.htm>. Accessed June 19, 2014.



- All equipment and materials shall be stored within the designated work areas so as to avoid obstructing traffic.
- Adequate driving and bicycling conditions on Geary Road shall be maintained throughout the construction period.
- The SFPUC and its contractors shall coordinate individual traffic control plans for SFPUC projects in the Sunol Valley.

**Mitigation Measure M-BI-1a: Worker Environmental Awareness Program Training.**

A project-specific Worker Environmental Awareness Program (WEAP) training shall be developed and implemented by a qualified biologist for the project and attended by all construction personnel prior to beginning work onsite. The training could consist of a recorded presentation that could be reused for new personnel. The WEAP training shall generally include but not be limited to the following:

- Applicable State and federal laws, environmental regulations, project permit conditions, and penalties for non-compliance;
- Special-status plant, fish, and wildlife species with potential to occur at or in the vicinity of the project site, avoidance measures, and a protocol for encountering such species including a communication chain;
- Pre-construction surveys and biological monitoring requirements associated with each phase of work;
- Known sensitive resource areas in the project vicinity that are to be avoided and/or protected as well as approved project work areas; and
- Best management practices (BMPs) and their location on the project site for erosion control and/or species exclusion.

**Mitigation Measure M-BI-1b: Onsite Biological Monitoring During Construction Activities.**

A qualified biological monitor shall be onsite during ground disturbance (i.e., vegetation removal; grading of work areas; excavation of the creek bed or bank to accommodate temporary stair system, work platform, or concrete weirs; installation of species exclusion fencing and/or silt fencing; site restoration) and dewatering of the work areas within Alameda Creek. Following these activities, the biological monitor shall conduct weekly site visits throughout the duration of project construction to ensure implementation of and compliance with project mitigation measures, such as inspecting the integrity of the exclusion fence and providing environmental training of new workers on the project.

The biological monitor shall have authority to stop construction activities and develop alternative work practices, in consultation with construction personnel and resource agencies, if construction activities are likely to affect special-status species or other sensitive biological resources.

Only the qualified biological monitor shall relocate animals that may enter work areas outside of the project site boundaries. Federally and State-listed species shall be relocated by qualified biologists as authorized by United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If a special-status species enters the project site while the

qualified biological monitor is not onsite, the construction supervisor shall stop all work within 100 feet of the individual and contact the SFPUC project manager and qualified biological monitor to relocate the species. If relocation is not timely or feasible, the construction supervisor shall monitor the individual and no work shall recommence until it moves at least 100 feet beyond the project site on its own accord.

**Mitigation Measure M-BI-1c: Species Exclusion Fencing.**

To prevent special-status species from moving through the project site, the SFPUC or its contractors shall install temporary exclusion fencing around key project boundaries, including all project staging areas. Fencing shall be installed immediately prior to the start of construction activities. The SFPUC shall ensure that the temporary exclusion fencing is continuously maintained until all construction activities are completed. The fence shall be CDFW-approved species exclusion fencing, with a minimum height of 3 feet above ground surface, with an additional 4 to 6 inches of fence material buried such that species cannot crawl under the fence, and shall include escape funnels to allow species to exit the work areas. The exclusion fence shall not cross Alameda Creek but shall be installed around project staging areas at the top of bank, confining species movement to within the channel or areas unaffected by project activities.

A qualified biological monitor shall be onsite during initial vegetation clearing, grading, and installation of the fencing to survey and relocate animals outside of the work area boundaries. Federally and State-listed species shall be relocated by qualified biologists as authorized by the USFWS and CDFW. The exclusion fencing shall be removed only after construction of the project is entirely completed.

Exclusion construction fencing and explanatory signage shall be placed around the perimeter of sensitive vegetation communities (i.e., oak woodlands and special-status plant communities within or immediately adjacent to the project site) that could be affected by construction activities throughout the period during which such impacts could occur. Signage shall state "Sensitive Resource – Keep Out."

**Mitigation Measure M-BI-1d: General Mitigation Measures during Construction.**

The SFPUC shall ensure that the following general measures are implemented by the contractor while working in the project site during construction to prevent and minimize impacts on special-status species and sensitive natural communities:

- Project-related vehicles shall observe a 15 mile-per-hour speed limit on unpaved roads in the project site.
- No firearms or pets shall be allowed in the project site.
- The contractor shall provide closed garbage containers for the disposal of all food-related trash items. 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 fish or wildlife to the project site.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas, and spill kits containing cleanup materials shall be available onsite. The project Storm Water Pollution Prevention Plan (SWPPP) shall stipulate the minimum distance that maintenance activity must be from waters of the United States.

- Project personnel shall be required to report immediately any harm, injury, or mortality of a listed species (federal or state) during construction, including entrapment, to the construction foreman or biological monitor, who will in turn 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 1 working day of the incident. The SFPUC shall follow up with written notification to the appropriate agencies within 5 working days of the incident. All special-status species observations shall be recorded on California Natural Diversity Data Base (CNDDDB) field sheets and sent to the CDFW by the SFPUC.
- The spread of invasive non-native plant species and plant pathogens shall be avoided or minimized by implementing the following measures:
  - Construction equipment shall arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species.
  - Any imported fill material soil amendments, gravel, or other materials required for construction and/or restoration activities that will be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material.
  - Certified weed-free imported erosion control materials (or rice straw in upland areas) shall be used exclusively, if possible.
  - To reduce the movement of invasive weeds into uninfested areas, the contractor shall stockpile topsoil removed during excavation (e.g., during grading of staging areas or excavation to accommodate installation of the temporary stair system and work platform) and shall subsequently reuse the stockpiled soil for re-establishment of disturbed project areas.

**Mitigation Measure M-BI-1e: Avoidance, Minimization, and Habitat Restoration and Enhancement Measures for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake.**

The following conservation measures shall be implemented to minimize or eliminate potential adverse impacts on California tiger salamander, California red-legged frog, and Alameda whipsnake during project-related activities:

- Project areas disturbed by vegetation removal, grading of staging areas, excavation to accommodate the installation of the temporary stair system and work platform shall be revegetated, at the direction of a qualified botanist or restoration specialist, with an appropriate assemblage of native vegetation suitable for the area.
- As necessary, erosion control measures shall be implemented to prevent any soil or other materials from entering any nearby aquatic habitat (e.g., Staging Areas 2 and 3 and downslope of the temporary wooden access stairways). Erosion control measures shall be installed adjacent to suitable aquatic habitat to prevent soil from eroding or falling into the area.
- Locations of erosion control measures and the types of appropriate sediment control measures shall be specified in the SWPPP. Sediment control measures shall be furnished, constructed, maintained, and later removed as shown in the SWPPP. Plastic monofilament of any kind (including those labeled as biodegradable, photodegradable, or UV-degradable) shall not be used. Only natural burlap, coir, or jute wrapped fiber rolls shall be used.

- All trenches of a depth of 2 feet or greater shall be covered at the end of each workday, or escape ramps shall be installed in the trench every 3 feet to allow wildlife that fall in a means to escape.
- Construction activities in suitable California tiger salamander and California red-legged frog upland habitat should ideally be conducted in the dry season, April 15 through October 31.
- A pre-construction survey shall be conducted within 14 days prior to ground-disturbing construction activity that occurs in designated suitable upland habitat. The survey shall include careful inspection of all potential refugia. Any California tiger salamander or California red-legged frog found shall be captured and held for a minimum amount of time necessary to relocate the animal to a suitable location a minimum of 300 feet outside of the work area or be allowed to move out of project site on its own accord. Vehicles parked overnight shall be inspected for harboring species each morning before they are moved.

A qualified biologist shall use best practices for capture, storage, and transport of California tiger salamanders and California red-legged frogs, including not using latex gloves to handle amphibians; having clean hands that are free of lotions, soaps, and insect repellents; and keeping individuals in a cool, moist, aerated environment while in captivity.

#### ***Habitat Restoration Plan***

The SFPUC shall prepare a **Habitat Restoration Plan** to be implemented by the contractor for the project. The Habitat Restoration Plan shall be subject to resource agency review and implemented in coordination with applicable resource agency permit requirements. The Habitat Restoration Plan shall detail restoration activities required for any aquatic and upland habitats temporarily affected by project construction-related activities to restore the areas to pre-project conditions. Site-specific restoration measures and performance standards shall be outlined in the restoration component of the plan. The plan shall identify the locations to be restored; a suitable plant palette for each site and/or habitat; planting methods and materials to be used (e.g., seed/propogules collection, cleaning, and storage, etc.); installation timing and monitoring schedule; monitoring methods; potential contingency measures or adaptive management approach; and reporting guidelines. The annual monitoring reports shall be submitted to the applicable resource agencies. The Habitat Restoration Plan shall also detail suitable habitat enhancements to be completed at the project site as part of the project for California tiger salamander, California red-legged frog, and Alameda whipsnake. The plan shall include performance standards for monitoring habitat restoration and enhancement activities with respect to these protected species as well as response actions to be implemented if the performance standards are not met. These actions may include preservation of additional habitat for California tiger salamander, California red-legged frog, and Alameda whipsnake within CDFW-and/or USFWS-approved conservation area.

The Habitat Restoration Plan shall be submitted to applicable resource agencies such as the United States Army Corps of Engineers, Regional Water Quality Control Board, CDFW, and USFWS. The SFPUC shall ensure that a qualified biologist, botanist, or restoration specialist reviews the restoration efforts in all vegetation communities. Described below are the minimum restoration and compensation measures that shall be included in the plan.

#### ***Invasive Weed Control Measures***

To avoid or minimize the introduction or spread of invasive weeds such as yellow star-thistle, purple star-thistle (*Centaurea calcitrapa*), Italian thistle, bull thistle (*Cirsium vulgare*), barb goat grass (*Aegilops triuncialis*), and medusa head grass (*Elymus caput-medusae*) into uninfested areas, the SFPUC shall

incorporate the measures to control invasive weeds outlined in Mitigation Measures M-BI-1a and M-BI-1d.

#### *Minimum Restoration Measures for Temporarily Affected Areas*

Temporarily disturbed areas located within the limits of construction but outside of the permanent impact area shall be restored to their baseline conditions. These areas include project staging areas and the footprint of temporary access system to Alameda Creek. Baseline conditions shall be identified for all affected habitats requiring mitigation under the project by conducting surveys of affected areas during the appropriate season and prior to the start of construction. Survey data shall document species composition, total vegetation cover (by vegetation type), total cover of weeds, and total cover of native and non-native species. These data shall inform the writing of the restoration plan and development of appropriate performance standards for each restoration area.

#### *Minimum Performance Standards*

The performance standards for restoring temporarily disturbed areas and compensation planting areas shall be as follows:

- All areas of oak woodland, California sagebrush scrub, California sycamore, and non-native grassland temporarily disturbed during vegetation removal and ground disturbance associated with staging area preparation or installation of the stair system and work platform shall be restored to their approximate pre-construction condition. Annual grassland vegetation shall be reseeded with a native grass and forb seed mix. Percent cover and vegetation composition (other than non-native annual grassland) shall meet cover and composition criteria determined in consultation with applicable permitting agencies with the intent to return affected areas to baseline conditions.
- Temporarily affected and restored areas shall be monitored at least once a year for at least 5 years or longer, as determined in consultation with the applicable permitting agencies and/or as needed, to verify whether the vegetation is fully established and self-sustaining. Trees planted in riparian areas shall be monitored for 10 years.
- If full maturity of slow-growing vegetation takes longer than 5 years, such species shall be fully established and self-sustaining to meet the standards, and the monitoring period shall be extended accordingly to verify if the vegetation is fully established and self-sustaining.
- Oak woodland, California sagebrush scrub, California sycamore, and non-native grassland shall be monitored for the first 5 years for invasive species. The relative cover of invasive plant species shall not exceed 10 percent in any year. Invasive plant species shall be defined as any high- or moderate-level species on the California Invasive Plant Inventory or as A or B level species, as applicable, on the California Department of Food and Agriculture pest rating list.
- Winter/early spring monitoring for invasive weed seedlings shall occur in the first 2 years following installation. This monitoring will allow problem weed areas to be identified early and appropriate treatments can be planned and carried out. Successful weed management during the restoration establishment phase (first 2 years) when weed populations are small is critical for preventing costly future maintenance and chronic invasive weed issues in the restoration areas.
- Maintenance and monitoring shall continue until the performance standards are met. If performance standards cannot be met within 5 years, the SFPUC may explore alternative mitigation options with the applicable resource agencies, such as offsite compensation or mitigation credits.

### **Mitigation Measure M-BI-1f: Nesting Bird Protection Measures.**

Nesting birds and their nests shall be protected during construction by use of the following measures:

- Removal of scrub and riparian vegetation and trimming of trees shall occur outside the bird nesting season (February 1 to August 30), to the extent feasible.
- If removal of scrub and riparian vegetation and trimming of trees during bird nesting season cannot be fully avoided, a qualified wildlife biologist shall conduct pre-construction nesting surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys shall be performed for the project site and suitable habitat within 250 feet of the project site in order to locate any active passerine (perching bird) nests and within 500 feet of the project site to locate any active raptor (birds of prey) nests.
- If active nests are located during the pre-construction bird nesting surveys, the wildlife biologist shall evaluate if the schedule of construction activities could affect the active nests and the following measures shall be implemented based on their determination:
  - If construction is not likely to affect the active nest, it may proceed without restriction; however, a biologist shall regularly monitor the nest to confirm there is no adverse effect and may revise their determination at any time during the nesting season. In this case, the following measure would apply.
  - If construction may affect the active nest, the biologist shall establish a no disturbance buffer. Typically, these buffer distances are between 25 feet and 250 feet for passerines and between 300 feet and 500 feet for raptors. These distances may be adjusted depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or active trail) and if an obstruction, such as a large rock formation, is within line-of-sight between the nest and construction. For bird species that are federally and/or State-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), an SFPUC representative, supported by the wildlife biologist, shall consult with the USFWS and/or CDFW regarding modifying nest buffers, prohibiting construction within the buffer, modifying construction, and removing or relocating active nests that are found on the site.
- Any birds that begin nesting within the project site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases.

### **Mitigation Measure M-BI-1g: Avoidance and Minimization Measures for Special-Status Bats.**

In coordination with the SFPUC, a pre-construction survey for special-status bats shall be conducted by a qualified biologist in advance of tree trimming and disturbance to rocks within Alameda Creek to characterize potential bat habitat and identify active roost sites. Should potential roosting habitat or active bat roosts be found in trees and/or rock crevices or outcrops to be disturbed under the project, the following measures shall be implemented:

- Trimming of trees and disturbance to rock crevices or outcrops shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 to August 15) and outside of months of winter torpor (approximately October 15 to February 28), to the extent feasible.

- If trimming of trees and disturbance to rock crevices or outcrops during the periods when bats are active is not feasible and bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where these activities are planned, a no-disturbance buffer as determined by a qualified biologist shall be established around these roost sites until they are determined to be no longer in-use as maternity or hibernation roosts.

Buffer distances may be adjusted around roosts depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or active trail) and if an obstruction, such as a large rock formation, is within line-of-sight between the nest and construction. For bat species that are State-listed sensitive species (i.e. any of the species of special concern with potential to occur on the project site), an SFPUC representative, supported by the wildlife biologist, shall consult with CDFW regarding modifying roosts buffers, prohibiting construction within the buffer, and modifying construction around maternity and hibernation roosts.

- The qualified biologist shall be present during tree trimming and disturbance to rock crevices or outcrops if bat roosts are present. Trees and rock crevices with roosts shall be disturbed only when no rain is occurring or is forecast to occur for 3 days and when daytime temperatures are at least 50 degrees Fahrenheit (°F).
- Trimming of trees containing or suspected to contain roost sites shall be done under supervision of the qualified biologist. Branches and limbs not containing cavities or fissures in which bats could roost shall be cut only using chainsaws. Branches or limbs containing roost sites shall be trimmed the following day, under the supervision of the qualified biologist, also using chainsaws.
- Rock crevices or outcrops containing or suspected to contain bat roosts within the project site shall be disturbed under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. These areas shall be modified to significantly change the roost conditions, causing bats to abandon and not return to the roost.
- Bat roosts that begin during remediation shall be presumed to be unaffected, and no buffer would be necessary.

**Mitigation Measure M-BI-1h: Avoidance and Minimization Measures for San Francisco Dusky-Footed Woodrat.**

In coordination with the SFPUC, a pre-construction survey for San Francisco dusky-footed woodrat middens shall be conducted by a qualified biologist prior to the start of construction in suitable habitat (i.e. oak woodland and California sagebrush scrub surrounding Staging Areas 1, 2, 3, and along Camp Ohlone Road). Active middens identified within the project site shall be flagged as a sensitive resource and avoided during construction, if feasible. Should avoidance of active woodrat middens within the project site not be feasible, the middens shall be dismantled by hand under the supervision of a qualified biologist. If young are encountered during dismantling of the nest, material shall be replaced and a 50-foot no-disturbance buffer shall be established around the active midden. The buffer shall remain in place until young have matured enough to disperse on their own accord and the midden is no longer active. Nesting substrate shall then be collected and relocated to suitable oak woodland habitat outside of the project area. Appropriate safety gear (e.g., respirator, gloves, and tyvek suit) shall be used by the qualified biologist while relocating woodrat nests.



**Mitigation Measure M-BI-1i: Avoidance and Minimization Measures for Ringtail.**

In coordination with SFPUC, a pre-construction survey for ringtail dens shall be conducted by a qualified biologist prior to the start of construction within the Alameda Creek riparian corridor portion of the project site and surrounding suitable habitat. Should a ringtail be found residing in an active den within the project site, a no-disturbance buffer would be determined around the den in consultation with CDFW until no longer in use or until CDFW provides approval to displace animals from the site.

**Mitigation Measure M-BI-2: Avoidance and Minimization Measures for Native Trees.**

The SFPUC shall avoid and minimize impacts on native mature trees (defined as trees with a diameter at breast height of 6 inches or an aggregate 10-inch diameter at breast height for multi-trunk trees) within areas of temporary impacts by ensuring the contractor implements the following measures:

- A qualified arborist (defined as an International Society of Arboriculture-certified arborist or a consulting arborist who is a member of the American Society of Consulting Arborists) or qualified biologist shall delineate the location of protective fencing to be installed between protected trees and areas to be affected under project construction (e.g., staging areas and access roads). This tree protection zone shall at least equal the dripline of the trees to be protected. Protective fencing shall be highly visible, orange snow-fencing, or a material of similar visibility, and installed with t-stakes.
- For native trees on slopes, if ground-disturbing work is to be performed upslope of any such trees, a silt fence shall be installed at the upslope base of the tree protection fence (e.g., top of bank), where feasible, to prevent soil from drifting down over the root zone (within the tree dripline). Should the installation of silt fence not be feasible any soil which drifts onto the root zone of protected trees shall be removed on a daily basis and immediately following the ground disturbing activity which deposits such soil.
- The contractor shall be required to perform any tree trimming necessary for the project using the pruning guidelines set forth in the American National Standards Institute (ANSI) A300 standards for pruning.
- Prior to trimming trees within the project site, the contractor shall visually inspect trees for symptoms of sudden oak death (SOD) and the potential presence of the plant pathogen *Phytophthora ramorum* known to cause SOD. If diseased trees are identified within the project site, site controls shall be used to minimize the spread of infected plant and soil material. After controlled limbing, affected tree trimmings shall be segregated by the contractor for appropriate offsite disposal in coordination with the San Francisco or Alameda County forester or authorized agricultural inspector. Soil removed in the immediate vicinity of the infected tree shall not be used in site restoration and may require disposal at a landfill.

**Mitigation Measure M-BI-3: Minimization of Disturbance to Waters of the United States and Waters of the State.**

The SFPUC and its contractors shall minimize impacts on waters of the United States and waters of the state by implementing the following measures:

- Avoid construction activities in saturated or ponded streams (typically during the spring and winter) to the maximum extent feasible. Where water features must be disturbed in support of

the project, the minimum area of disturbance necessary for construction shall be identified, and the area outside of that shall be avoided.

- Stabilize exposed slopes and streambanks immediately upon completion of construction activities (e.g., removal of the temporary wooden stairways).
- During construction, implement measures to catch trimmed tree limbs, shrubs, debris, soils, and other construction materials created by or used in vegetation removal before such materials can enter the waterway. Immediately remove materials that are inadvertently deposited below the ordinary high water mark (OHWM) of Alameda Creek in a manner that minimizes disturbance of the drainage bed and bank. Such materials shall be placed either in soil stockpiles or an appropriately managed waste collection container until the materials can be properly disposed of.

**Mitigation Measure M1-BI-4: Fish and Amphibian Exclusion, Rescue and Removal from Dewatered Work Areas.**

Prior to dewatering the work areas within Alameda Creek, fish exclusion netting shall be installed by a qualified fish biologist both upstream and downstream to isolate the work area. To identify and relocate amphibians, a qualified biologist shall perform a visual encounter survey of the work area within 24 hours of dewatering. Amphibians shall be captured by hand or aquatic dip and relocated to suitable off-site habitat. Fish shall be removed from the project work sites by a qualified fish biologist using approved methods in accordance with the NMFS Biological Opinion (BO) for the Calaveras Dam Replacement Project (CDRP). Acceptable methods for removing fish during dewatering of the project sites within Alameda Creek include electrofishing, rotary screw trap, pipe-trap, or fyke-net trap. Construction dewatering shall also occur in accordance with conditions of the NMFS BO and standard best practices and under the supervision of a qualified biologist. Concrete pours are required to be done in the dry and allowed to cure for 7 days following each pour. Therefore, the three sites corresponding to Features 9, 10, and 11 shall be dewatered and dried during construction and curing of the concrete. All fish and amphibians shall be removed from the sites that are dewatered prior to completely dewatering the stream segments. Rescued fish and amphibians shall be relocated to nearby suitable habitat that has been agreed to with the regulatory agencies.

**Mitigation Measure M-GE-3: Rockfall Hazard Prevention during Construction.**

The SFPUC shall provide flagging, signage or fencing, as appropriate, to ensure that workers avoid areas of known rock falls to the north of Feature 11 during construction.

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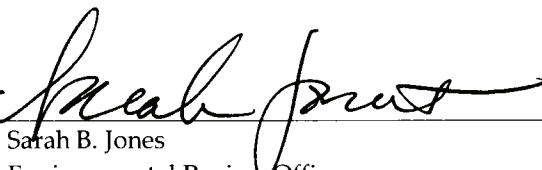
## G. PUBLIC NOTICE AND COMMENT

A "Notification of Project Receiving Environmental Review" was mailed on July 18, 2014 to property owners and residents of property within 300 feet of the project site, responsible and trustee agencies, and interested parties. One comment in response to the notification was received. Jeff Miller of the Alameda Creek Alliance requested the PMND evaluate the compatibility of the proposed fish passage improvements with the scenic resources of Alameda Creek and include artistic renditions or computer simulations of the proposed weir treatments.

## H. DETERMINATION

On the basis of this Initial Study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

November 19, 2014 

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Date Sarah B. Jones  
Environmental Review Officer  
for  
John Rahaim  
Director of Planning

## I. INITIAL STUDY AUTHORS

### **Planning Department, City and County of San Francisco**

Environmental Planning  
1650 Mission Street, Suite 400  
San Francisco, CA 94103

Environmental Review Officer: Sarah B. Jones  
Senior Environmental Planner: Steven Smith  
Senior Reviewer: Chris Kern

### **Project Sponsor**

#### **San Francisco Public Utilities Commission**

Bureau of Environmental Management  
525 Golden Gate Avenue, 6th Floor San Francisco, CA 94102  
Environmental Project Manager: Yin Lan Zhang

### **Initial Study Consultants**

#### **ESA**

550 Kearny Street, Suite 800 San Francisco, CA 94108  
Project Manager: Elijah Davidian  
Senior Reviewers: Jill Hamilton and Alisa Moore

#### **Orion Environment (Noise, Geology and Soils, Hydrology and Water Quality, Hazards and Hazardous Materials, Public Utilities and Service Systems, Mineral and Energy Resources)**

211 Sutter Street  
San Francisco, CA 94104  
Valerie Geier  
Mary McDonald, PG, QSP, QSD  
John Davis

#### **LCW Consulting (Transportation and Traffic)**

3990 20th Street  
San Francisco, CA 94103  
Luba Wyznyckj

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# **APPENDIX A**

## **Special Status Species Considered in Project Evaluation**

**TABLE A-1**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Species Listed or Proposed for Listing</b>			
<b>Plants</b>			
Pallid manzanita <i>Arctostaphylos pallida</i>	FT/CE/1B.1	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub. Requires fire for reproduction. 185-465 m. Blooms Dec-Mar	<b>Absent.</b> Suitable habitat not found onsite.
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE/--/1B.1	Cismontane woodland, coastal dunes, coastal scrub, sandy terraces and bluffs or in loose sand. 3-120 m. Blooms Apr-Sept	<b>Absent.</b> Suitable habitat not found onsite.
Palmate-bracted salty bird's-beak <i>Chloropyron palmatum</i>	FE/CE/1B.1	Chenopod scrub, valley and foothill grassland. Usually found on Pescadero silty clay which is alkaline, with <i>Distichlis</i> , <i>Frankenia</i> , etc. 5-155m. Blooms May-Oct	<b>Absent.</b> Suitable habitat not found onsite. No alkaline soils present.
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/1B.1	Coastal scrub, valley and foothill grassland, and serpentine outcrops in grassland or scrub. 20-335 m. Blooms May-July	<b>Absent.</b> Suitable habitat not found onsite. No serpentine soils present.
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/1B.1	Coastal prairie, valley and foothill grassland. Found on light, sandy soil or sandy clay; often with non-natives. 10-260 m. Blooms Jun-Oct	<b>Absent.</b> Suitable habitat not found onsite.
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE/--/1B.1	Valley and foothill grassland, vernal pools, cismontane woodland, swales, low depressions, in open grassy areas. 1-445 m. Blooms Mar-July	<b>Absent.</b> Suitable habitat not found onsite.
California seablite <i>Suaeda californica</i>	FE/--/1B.1	Margins of coastal salt marshes and swamps. 0-5 m. Blooms July-Oct	<b>Absent.</b> Suitable habitat not found onsite.
<b>Invertebrates</b>			
Conservancy fairy shrimp <i>Branchinecta conservation</i>	FE/--	Conservancy fairy shrimp are endemic to vernal pools in California and this species is restricted to the Central Valley except for one population in the Central Coast in Ventura County.	<b>Absent.</b> Suitable habitat not found onsite.
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE/--	Longhorn fairy shrimp are restricted to the Central Valley and are dependent on seasonally inundated wetlands, such as vernal pools.	<b>Absent.</b> Suitable habitat not found onsite.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Ephemeral freshwater vernal pools.	<b>Absent.</b> Suitable habitat not found onsite.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE/--	This species inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water.	<b>Absent.</b> Suitable habitat not found onsite.
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Castilleja exserta</i> , and <i>C. densiflora</i> are the secondary host plants.	<b>Absent.</b> Suitable habitat and host plants not found onsite.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name Scientific Name	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Species Listed or Proposed for Listing (cont.)</b>			
<b>Invertebrates (cont.)</b>			
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE/--	Subspecies of the more common callippe fritillary butterfly ( <i>Speyeria callippe</i> ). The silverspot's host plant is Johnny jump-up ( <i>Viola pedunculata</i> ).	<b>Low.</b> Individual host plants could occur sporadically in grassland and oak woodland within the project area. Host plant documented sparingly within the project vicinity northwest of the project along Alameda Creek and southeast of Calaveras Reservoir.
<b>Fish</b>			
Steelhead - Central California Coastal DPS <i>Oncorhynchus mykiss</i>	FT/--	Spawns and rears in coastal streams between the Russian River and Aptos Creek, as well as drainages tributary to San Francisco Bay, where gravelly substrate and shaded riparian habitat occurs.	<b>Present.</b> This species is known to occur in Alameda Creek.
Longfin smelt <i>Spirinchus thaleichthys</i>	FC/CT	Found throughout the nearshore coastal waters and open waters of San Francisco Bay-Delta including the river channels and sloughs of the Delta. Spawns in the Delta.	<b>None.</b> Suitable coastal habitat is not present within the project area.
<b>Amphibians and Reptiles</b>			
California tiger salamander <i>Ambystoma californiense</i>	FT/CT	Central Valley DPS listed as threatened. Santa Barbara and Sonoma Counties DPS listed as endangered. Needs underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding	<b>Moderate.</b> Suitable foraging, dispersal, and refugia habitat is present within the project area. A known breeding pond exists 0.2 miles north of Little Yosemite and suitable aquatic breeding habitat may also be available 0.25 miles to the east of staging area 1.
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	FT/CT	Restricted to valley-foothill hardwood habitat of the coast ranges between Monterey and north San Francisco Bay. Inhabits south-facing slopes and ravines where shrubs form a vegetative mosaic with oak trees and grasses.	<b>High.</b> Suitable foraging, dispersal, and refugia habitat is present within the project area. Known occurrences are documented adjacent to the project area.
California red-legged frog <i>Rana draytonii</i>	FT/CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to aestivation habitat.	<b>High.</b> Suitable foraging, dispersal, and refugia habitat is present within the project area. Known occurrences are documented in Alameda Creek between staging area 1 and project feature locations.
<b>Birds</b>			
Golden eagle <i>Aquila chrysaetos</i>	BCC/FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons and large trees in open areas provide nesting habitat.	<b>Low.</b> Suitable habitat not found onsite. May occur over the project area on a transient basis.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	<b>Absent.</b> Suitable habitat not found onsite.



**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Species Listed or Proposed for Listing (cont.)</b>			
<b>Birds (cont.)</b>			
White-tailed kite <i>Elanus leucurus</i>	--/FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	<b>Moderate.</b> Species may forage in open grasslands and nest in mature trees within or adjacent to the project area.
American peregrine falcon <i>Falco peregrinus anatum</i>	DL/DL&FP	Woodlands, coastal habitats, riparian areas, coastal and inland waters, human made structures that may be used as nest or temporary perch sites.	<b>Low.</b> May forage within the project area. Suitable nesting habitat is not present within the project area.
Bald eagle <i>Haliaeetus leucocephalus</i>	DL/CE&FP	Requires large bodies of water, or free-flowing rivers with abundant fish and adjacent snags or other perches.	<b>Low.</b> May occur over the project area on at transient basis. Known breeding pair documented on the west shore of Calaveras Reservoir 2011-2014.
California black rail <i>Laterallus jamaicensis coturniculus</i>	BCC/CT&FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	<b>Absent.</b> Suitable habitat not found onsite.
California brown pelican <i>Pelicanus occidentalis californicus</i>	DL/DL&FPS	Nests on protected islets near freshwater lakes and marine waters.	<b>Absent.</b> Suitable habitat not found onsite.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE&FP	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	<b>Absent.</b> Suitable habitat not found onsite.
Yellow warbler <i>Dendroica petechia brewsteri</i>	BCC/CSC	Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging.	<b>Present.</b> This species is known to occur in the project area. Typical nesting habitat is present in the riparian trees within and adjacent to the project area.
<b>Mammals</b>			
Ringtail <i>Bassariscus astutus</i>	--/FP	Usually found under 1400m in elevation in a variety of habitats throughout the western US including: riparian areas, semi-arid country, deserts, chaparral, oak woodlands, pinyon pine woodlands, juniper woodlands and montane conifer forests.	<b>Moderate.</b> Suitable habitat is present within the project area.
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE&FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Found primarily in pickleweed ( <i>Salicornia</i> spp.). Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	<b>Absent.</b> Suitable habitat not found onsite.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Species Listed or Proposed for Listing (cont.)</b>			
<b>Mammals (cont.)</b>			
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE/CT	Annual grasslands or grassy open stages with scattered shrubby vegetation and requires loose-textured sandy soils for burrowing, and for a suitable prey base.	<b>Low.</b> The project area is located outside of the known range for this species.
<b>Other Special-Status Species</b>			
<b>Plants</b>			
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/1B.2	Alkali playa and flats, valley, annual, and foothill grassland, vernal pools, low ground, and flooded lands. 1-170 m. Blooms Mar-Jun	<b>Absent.</b> Suitable habitat not found onsite.
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/1B.2	Cismontane woodland, valley and foothill grassland. Found on gravelly slopes, openings in woodland, often serpentine. 50-500m. Blooms Mar-Jun	<b>Low.</b> Suitable habitat is present within the project area. Not documented within 5 miles of the project area.
California androsace <i>Androsace elongata</i> ssp. <i>acuta</i>	--/--/4.2	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland. 150-1200m. Blooms Mar-Jun	<b>Low.</b> Presumed extant within the project vicinity. Suitable habitat is present within the project area. Not documented within 5 miles of the project area.
Heartscale <i>Atriplex cordulata</i> var. <i>tener</i>	--/--/1B.2	Chenopod scrub, valley and foothill grasslands. Alkaline flats and scalds in the Central Valley. Prefers sandy soils. 0-560 m. Blooms Apr-Oct.	<b>Absent.</b> Suitable habitat not found onsite.
Brittlescale <i>Atriplex depressa</i>	--/--/1B.2	Chenopod scrub, meadows, playas, valley and foothill grassland, vernal pools. Usually in alkali scalds or alkali clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. 1-320 m. Blooms Apr-Oct	<b>Absent.</b> Suitable habitat not found onsite. No saline or alkaline soils present.
San Joaquin spearscale <i>Atriplex joaquinana</i>	--/--/1B.2	Chenopod scrub, alkali meadow, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with species such as <i>Distichlis spicata</i> and <i>Frankenia</i> . 1-835 m. Blooms Apr-Sept	<b>Absent.</b> Suitable habitat not found onsite. No saline or alkaline soils present.
Lesser saltscale <i>Atriplex minuscula</i>	--/--/1B.1	Chenopod scrub, playas, valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. 15-200m. Blooms May-Oct	<b>Absent.</b> Suitable habitat not found onsite. No saline or alkaline soils present.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i>	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. 90-1555m. Blooms Mar-Jun	<b>Low.</b> Marginally suitable habitat present though no serpentine soils occur in the project area. Not documented within 5 miles of the project area.
Big tarweed <i>Blepharizonia plumosa</i>	--/--/1B.1	Valley and foothill grassland. Dry hills and plains in annual grassland. Clay to clay-loam soils; usually found on slopes and often in burned areas. 30-505m. Blooms July-Oct	<b>Low.</b> Suitable habitat is present within the project area. Not documented within 5 miles of the project area. Focused survey of the project site performed in September 2014 for this species was negative.
Mount Day rockcress <i>Boechera rubicundula</i>	--/--/1B.1	Chaparral and rocky slopes. 1200m. Blooms Apr-May	<b>Absent.</b> Suitable habitat not found onsite.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

<b>Common Name</b> <i>Scientific Name</i>	<b>Listing Status</b> USFWS/ CDFW/Other	<b>General Habitat</b>	<b>Potential for Species</b> <b>Occurrence Within Project Site</b>
<b>Other Special-Status Species (cont.)</b>			
<i>Plants (cont.)</i>			
Round-leaved filaree <i>California macrophylla</i>	--/--/1B.1	Cismontane woodland, valley and foothill grassland. Clay soils. 15-1,200 m. Blooms Mar-May	<b>Low.</b> Marginally suitable habitat is present within the project area. Not documented within 5 miles of the project area.
Oakland star-tulip <i>Calochortus umbellatus</i>	--/--/4.2	Chaparral, lower montane coniferous forest, broadleaved upland forest, valley and foothill grassland. Often found on serpentine. 100-700m. Blooms Mar-May	<b>Low.</b> Suitable habitat is present within the project area. Not documented within 5 miles of the project area.
Chaparral harebell <i>Campanula exigua</i>	--/--/1B.2	Chaparral and rocky sites; usually found on serpentine soils in chaparral. 275-1250m. Blooms May-June	<b>Absent.</b> Suitable habitat not found onsite.
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	--/--/1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 1-230 m. Blooms May-Oct	<b>Low.</b> Presumed extant within the project vicinity. Marginally suitable habitat present though no alkaline soils occur in the project area. Not documented within 5 miles of the project area.
Point Reyes bird's-beak <i>Chloropyron maritimus</i> ssp. <i>palustris</i>	--/--/1B.2	Coastal salt marsh usually with <i>Salicornia</i> , <i>Distichlis</i> , <i>Jaumea</i> , <i>Spartina</i> , etc. 0-15 m. Blooms Jun-Oct	<b>Absent.</b> Suitable habitat not found onsite.
Hispid salty bird's beak <i>Chloropyron molle</i> ssp. <i>hispidum</i>	--/--/1B.1	Meadows and seeps, playas, valley and foothill grassland. Found in damp alkaline soils, especially in alkaline meadows and alkali sinks with <i>Distichlis</i> . 1-155m. Blooms July-Sept	<b>Absent.</b> Suitable habitat not found onsite.
Santa Clara red ribbons <i>Clarkia concinna</i> ssp. <i>automixa</i>	--/--/4.3	Cismontane woodland, chaparral. Found on slopes and near drainages. 90-1500m. Blooms May-Jun	<b>Low.</b> Presumed extant within the project vicinity. Marginally suitable habitat present within the project area. Not documented within 5 miles of the project area.
Livermore tarplant <i>Deinandra bacigalupii</i>	--/--/1B.2	Meadows and seeps. Alkaline meadows. 150-185m. Blooms July-Oct	<b>Absent.</b> Suitable habitat not found onsite.
Hospital Canyon larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	--/--/1B.2	Cismontane woodland, chaparral, coastal scrub. Found in wet, boggy meadows, openings in chaparral and in canyons. 195-1095m. Blooms Apr-June	<b>Low.</b> Documented occurrence within 5 miles of the project area. Suitable habitat not found onsite.
Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	--/--/4.3	Coastal scrub, chaparral, cismontane woodland. Sometimes found on serpentine. 200-1025m. Blooms Apr-Jun	<b>Low.</b> Presumed extant within the project vicinity. Marginally suitable habitat present within the project area. Not documented within 5 miles of the project area.
Hoover's button-celery <i>Eriogonum aristulatum</i> var. <i>hooveri</i>	--/--/1B.1	Found in alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 3-45m. Blooms in July	<b>Absent.</b> Suitable habitat not found onsite.
Diamond-petaled California poppy <i>Eschscholzia rhombipetala</i>	--/--/1B.1	Valley and foothill grassland. Alkaline, clay slopes and flats. 0-975 m. Blooms May-Apr	<b>Absent.</b> Suitable habitat not found onsite. No alkaline soils present.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name Scientific Name	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Other Special-Status Species (cont.)</b>			
<b>Plants (cont.)</b>			
Stinkbells <i>Fritillaria agrestis</i>	--/--/4.2	Cismontane woodland, chaparral, valley and foothill grassland. Sometimes found on serpentine soils though mostly found in nonnative grassland or in grassy openings in clay soil. 10-1555m. Blooms May-June	<b>Low.</b> Presumed extant within the project area. Marginally suitable habitat present within the project area. Not documented within 5 miles of the project area.
Fragrant fritillary <i>Fritillaria liliacea</i>	--/--/1B.2	Coastal scrub, valley and foothill grassland, coastal prairie. Often on serpentine; usually on clay soils, in grassland. 3-410 m. Blooms Feb-Apr	<b>Low.</b> Presumed extant within the project area. Marginally suitable habitat present within the project area. Not documented within 5 miles of the project area.
Diablo helianthella <i>Helianthella castanea</i>	--/--/1B.2	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils. Often in partial shade. 25-1,150 m. Blooms May-June	<b>Low.</b> Presumed extant within the project area. Suitable habitat present within the project area. Not documented within 5 miles of the project area.
Legenere <i>Legenere limosa</i>	--/--/1B.1	Vernal pools. Found in beds of vernal pools. 1-880m. Blooms Apr-June	<b>Absent.</b> Suitable habitat not found onsite.
Bristly leptosiphon <i>Leptosiphon acicularis</i>	--/--/4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Grassy areas, woodland, chaparral. 55-1500m. Blooms Apr-July	<b>Low.</b> Suitable habitat is present within the project area. Not documented within 5 miles of the project area.
Mt. Hamilton coreopsis <i>Leptosyne hamiltonii</i>	--/--/1B.2	Cismontane woodland. Found on steep shale talus with open southwestern exposure. 550-1300m. Blooms Mar-May	<b>Absent.</b> Suitable habitat not found onsite.
Arcuate bush-mallow <i>Malacothamnus arcuatus</i>	--/--/1B.2	Chaparral. Found in gravelly alluvium. 15-355m. Apr-Sept	<b>Absent.</b> Suitable habitat not found onsite.
Hall's bush-mallow <i>Malacothamnus hallii</i>	--/--/1B.2	Chaparral. Some populations found on serpentine soils. 10-550m. Blooms May – Sept	<b>Absent.</b> Suitable habitat not found onsite.
San Antonio Hills monardella <i>Monardella antonina</i> ssp. <i>antonina</i>	--/--/3	Cismontane woodland, chaparral. Rocky slopes and ephemeral drainages. 320-1000m. Blooms June-Aug	<b>Low.</b> Marginally suitable habitat is present within the project area. Not documented within 5 miles of the project area.
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	--/--/1B.1	Coastal scrub, valley and foothill grassland, vernal pools. Found in alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 15-1210m. Blooms Apr-July	<b>Absent.</b> Suitable habitat not found onsite. No alkaline soils present.
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/1A	Meadows and seeps, marshes and swamps. Coastal salt marshes and alkaline meadows. 15-180m. Blooms Mar-May	<b>Absent.</b> Suitable habitat not found onsite.
Oregon polemonium <i>Polemonium carneum</i>	--/--/2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. 0-1830m. Blooms Apr-Sept	<b>Absent.</b> Suitable habitat not found onsite.
Maple-leaved checkerbloom <i>Sidalcea malachroides</i>	--/--/4.2	Broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest. Woodlands and clearings near coast; often found in disturbed areas. 0-730m. Blooms Apr-Aug	<b>Absent.</b> Suitable habitat not found onsite.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Other Special-Status Species (cont.)</b>			
<b>Plants (cont.)</b>			
Most beautiful jewel-flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland, serpentine outcrops, and on ridges and slopes. 120-730 m. Blooms Apr-Sept	<b>Low.</b> Several occurrences documented within the project vicinity. No serpentine soils present in the project area. Suitable habitat not found in onsite.
Slender-leaved pondweed <i>Stuckenia filiformis</i>	--/--/2B.2	Marshes and swamps, in shallow, clear water of lakes and drainage channels. 15-2,310 m. Blooms May-July	<b>Absent.</b> Suitable habitat not found onsite.
Saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	--/--/1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0-300 m. Blooms Apr-June	<b>Absent.</b> Suitable habitat not found onsite.
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	--/--/1B.1	Valley and foothill grassland. Alkaline clay. 1-455m. Blooms Mar-Apr	<b>Absent.</b> Suitable habitat not found onsite.
<b>Amphibians and Reptiles</b>			
Western pond turtle <i>Emys marmorata</i>	--/CSC	Aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat for egg-laying.	<b>Moderate.</b> Suitable habitat is present within the project area. Documented at the confluence of Calaveras and Alameda creeks. Species may disperse and forage throughout the project area.
San Joaquin whipsnake <i>Masticophis flagellum ruddocki</i>	--/CSC	Found in the deserts south of Mono County and the foothills of the coast ranges south of San Francisco Bay. Coachwhips occur in open terrain and are most abundant in grass, desert, scrub, chaparral, and pasture habitats.	<b>Low.</b> Suitable habitat is present within the project area. No documented occurrences near the project area.
Foothill yellow-legged frog <i>Rana boylei</i>	--/CSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	<b>High.</b> Suitable breeding and foraging habitat found in project area. Known to occur in Alameda Creek within the project area.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--/CSC	Valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grassland habitats in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast.	<b>Moderate.</b> Suitable habitat is present within the project area.
Western spadefoot <i>Spea hammondi</i>	--/CSC	Occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands.	<b>Low.</b> Suitable habitat is present onsite. No documented occurrences near the project area.
<b>Birds</b>			
Cooper's hawk <i>Accipiter cooperi</i>	--/CDFW WL&3503.5	Woodland, chiefly of open, interrupted or marginal type. Nest sites are mainly in riparian growths of deciduous trees but also relatively common in urban areas.	<b>Moderate.</b> Suitable nesting and foraging habitat is present within the project area.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Other Special-Status Species (cont.)</b>			
<i>Birds (cont.)</i>			
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CDFW WL&3503.5	Woodland, hunt on forest edges. Breeds in deep forests and favors conifer trees to build nests in.	<b>Moderate.</b> Suitable nesting and foraging habitat is present within the project area.
Tricolored blackbird <i>Agelaius tricolor</i>	--/CSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	<b>Low.</b> May occur in the project area on a transient basis. No suitable breeding habitat located in the project area.
Grasshopper sparrow <i>Ammodramus savannarum</i>	--/CSC	Moderately open grasslands of short to middle-height and with scattered shrubs.	<b>Moderate.</b> Suitable habitat is present within the project area.
Great blue heron <i>Ardea herodias</i>	--/* (rookery site)	Colonial nester in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	<b>Low.</b> May forage on occasion in the project area.
Long-eared owl <i>Asio otus</i>	--/CSC	Nests in conifer, oak, riparian, pinyon-juniper, and desert woodlands that are either open or are adjacent to grasslands, meadows, or shrub lands for foraging. Key habitat components are dense cover for nesting and roosting, suitable nest platforms, and open foraging areas.	<b>Moderate.</b> Suitable breeding and foraging habitat is present within and adjacent to the project area.
Burrowing owl <i>Athene cucularia</i>	--/CSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<b>Low.</b> Marginal foraging and nesting habitat is not found onsite.
Great horned owl <i>Bubo virginianus</i>	--/3503.5	Often uses abandoned nests of corvids or squirrels; nests in large oaks, conifers, eucalyptus.	<b>Moderate.</b> May forage in open grasslands and nest in mature trees within the project area.
Ferruginous hawk <i>Buteo regalis</i>	--/CDFW WL&3503.5	Uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges. Does not breed in California.	<b>Low.</b> May occur over the project area on a transient basis in winter.
Red-tailed hawk <i>Buteo jamaicensis</i>	--/3503.5	Usually nests in large trees, often in woodland or riparian deciduous habitats. Also known to nest in urban parks and neighborhoods. Forages over open grasslands and scrublands.	<b>Moderate.</b> Species is ubiquitous throughout the region. May forage in open grasslands and nest in mature trees within the project area.
Red-shouldered hawk <i>Buteo lineatus</i>	--/3503.5	Usually nests in large trees, often in woodland or riparian deciduous habitats. Forages over open grasslands and woodlands.	<b>Moderate.</b> May forage in open grasslands and nest in mature trees within the project area.
California horned lark <i>Eremophila alpestris actia</i>	--/CDFW WL (nesting)	Short-grass prairie, annual grasslands, coastal plains, and open fields.	<b>High.</b> Suitable foraging and nesting habitat is present within the project area.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Other Special-Status Species (cont.)</b>			
<b>Birds (cont.)</b>			
Prairie falcon <i>Falco mexicanus</i>	BCC/3503.5	Uncommon permanent resident that ranges from southeastern deserts northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada. Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas.	<b>Low.</b> May occur over the project area on a transient basis.
American kestrel <i>Falco sparverius</i>	--/3503.5	Frequents generally open grasslands, pastures, and fields; primarily a cavity nester in large trees near open areas.	<b>Moderate.</b> Suitable foraging and nesting habitat is present within the project area.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	BCC/CSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	<b>Low.</b> No suitable habitat is found in the project area.
Loggerhead shrike <i>Lanius ludovicianus</i>	--/CSC	Occurs in semi-open country with utility posts, wires, and trees to perch on. Nests in bushes and trees.	<b>Moderate.</b> Suitable habitat is present within the project area. Species has been documented near the project area.
Alameda song sparrow <i>Melospiza melodia pusillula</i>	BCC/CSC	Resident of salt marshes bordering central eastern San Francisco Bay. Inhabits pickleweed marshes; nests low in <i>Grindelia</i> (high enough to escape high tides) and in pickleweed.	<b>Absent.</b> No suitable habitat found onsite.
Osprey <i>Pandion haliaetus</i>	--/3503.5	Forages and breeds near rivers, lakes, and marine environments.	<b>Low.</b> May occur in the project area on a transient basis and forage over the Calaveras Reservoir.
Barn owl <i>Tyto alba</i>	--/3503.5	Found in open and partly open habitats, especially grasslands. Nests in tree cavities or buildings.	<b>Low.</b> May forage over open space in the project area.
<b>Mammals</b>			
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	<b>High.</b> Suitable roosting habitat is present in rock crevices and tree cavities within the project area. Presumed extant within the project vicinity.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/CSC	Mesic sites. Roosts in caves and open, hanging from walls and ceilings. Very sensitive to human disturbance.	<b>Low.</b> Typical roost habitat not found onsite. May forage in the project area. Nearest occurrence documented at Calaveras Reservoir.
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>	--/*	Open grassy hilltops and open spaces in chaparral and blue oak/digger pine woodlands. Needs fine, deep, well-drained soil for burrowing.	<b>Low.</b> Documented in the project vicinity around Calaveras Reservoir. Suitable habitat not found within the project area.

**TABLE A-1 (Continued)**  
**SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF**  
**LITTLE YOSEMITE FISH PASSAGE PROJECT**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	General Habitat	Potential for Species Occurrence Within Project Site
<b>Other Special-Status Species (cont.)</b>			
<i>Mammals (cont.)</i>			
Western mastiff bat <i>Eumops perotis californicus</i>	--/CSC /WBWG-H	Primarily a cliff dwelling species with maternity roosts under exfoliating rock slabs, and crevices in large boulders and buildings. Foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland and agricultural areas.	<b>Moderate.</b> Suitable roost habitat is present within the project area. No documented occurrences within the project vicinity.
Western red bat <i>Lasiurus blossevillii</i>	--/CSC /WBWG-H	Roosts primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. Preferred roost sites are protected from above, open below, and located above dark ground-cover. Such sites minimize water loss. Roosts may be from 0.6-13 m (2-40 ft) above ground level.	<b>Moderate.</b> Suitable roost habitat is present within the project area. No documented occurrences within the project vicinity.
Hoary bat <i>Lasiurus cinereus</i>	--/*/WBWG-M	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	<b>High.</b> Suitable roost habitat is present within the project area. May roost in trees onsite, particularly during migration periods in spring and fall.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	--/CSC	Prefers forest habitats with moderate canopy, year-round greenery, a brushy understory, and suitable nest building materials. Feeds mainly on woody plants, especially live oak, maple, coffeeberry, alder, and elderberry when available.	<b>High.</b> Suitable habitat is present within the project area. Species is known to occur in the vicinity of the project.
Salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	--/CSC	Salt marshes of the south arm of San Francisco Bay. Found at medium to high marsh 6-8 ft above sea level where abundant driftwood is scattered among pickleweed.	<b>Absent.</b> Suitable habitat not found onsite.
American badger <i>Taxidea taxus</i>	--/CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents.	<b>Low.</b> Suitable habitat not found onsite.

**STATUS CODES**

Federal (U.S. Fish and Wildlife Service [USFWS]):

FE = Listed as Endangered (in danger of extinction) by the federal government.  
 FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the federal government.  
 DL = Delisted

State (California Department of Fish and Wildlife [CDFW]):

CE = Listed as Endangered by the State of California.  
 CT = Listed as Threatened by the State of California.  
 CR = Listed as Rare by the State of California (plants only)  
 DL = Delisted  
 CSC = California Species of Special Concern.  
 FP = Fully Protected  
 WL = Watch List  
 3503.5 = Protection for species of Falconiformes (hawks) and Strigiformes (owls).  
 \* Special animal—listed on CDFW’s Special Animals List.

California Rare Plant Rank (CRPR):

List 1A = Plants presumed extirpated in California and either rare or extinct elsewhere.  
 List 1B = Plants rare, threatened, or endangered in California and elsewhere.  
 List 2A = Plants presumed extirpated in California, but more common elsewhere.  
 List 2B = Plants rare, threatened, or endangered in California, but more common elsewhere.  
 List 3 = Plants about which we need more information – a review list  
 List 4 = Plants of limited distribution – a watch list

Western Bay Working Group (WBWG):

WBWGH = High priority; Species that are imperiled or at a high risk of imperilment.  
 WBWGM = Medium priority; Species that warrant a closer evaluation due to potential imperilment.

SOURCE: CDFW, 2014; CNPS, 2014; USFWS, 2014