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PRELIMINARY MITIGATED NEGATIVE DECLARATION

Date:	September 24, 2025
Case No.:	**2024.000353ENV**
Project Title:	**Cherry Valley Dam Spillway Short-Term Improvement Project**
Site Area:	Near Cherry Lake in the Stanislaus National Forest in Tuolumne County
Project Sponsor:	San Francisco Public Utilities Commission
Staff Contact:	Timothy Johnston – (628) 652-7569 timothy.johnston@sfgov.org

Project Description

The San Francisco Public Utilities Commission (SFPUC) is proposing the Cherry Valley Dam Spillway Short-Term Improvement Project (project). The project would rehabilitate a segment of the existing unlined spillway discharge channel that receives Cherry Valley Dam spillway flows and directs the water toward Cherry Creek, in a generally north-south orientation. Debris from landslides on steep side slopes along the discharge channel has obstructed the channel and caused the spillway flows to be diverted east toward the Cherry Power Tunnel Adit entrance and public dispersed camping areas. The project would restore the alignment of the discharge channel to its original north-south orientation. Cherry Valley Dam and Lake are west of Lake Eleanor and Hetch Hetchy Reservoir in Tuolumne County, California, approximately 12 miles directly north of California State Route 120 or 23 miles north via Cherry Lake Road.

Findings

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 pages F-1 through F-3.

ATTACHMENT A

INITIAL STUDY
CHERRY VALLEY DAM SPILLWAY SHORT-TERM IMPROVEMENT PROJECT
PLANNING DEPARTMENT CASE NO. 2024.000353ENV

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LIST OF ACRONYMS AND ABBREVIATIONS

air basin	Mountain Counties Air Basin
air district	Tuolumne County Air Pollution Control District
California Register	California Register of Historic Resources
CEQA	California Environmental Quality Act
City	City and County of San Francisco
CO	carbon monoxide
db	decibels
dbA	A-weighted decibels
DPM	diesel particulate matter
GHG	greenhouse gas
Highway 120	California State Route 120
Hz	hertz
in/sec	inches per second
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
PM	particulate matter
$PM_{2.5}$	particulate matter equal to or less than 2.5 microns in diameter
PM_{10}	particulate matter equal to or less than 10 microns in diameter
PPV	peak particle velocity
project	Cherry Valley Dam Spillway Short-Term Improvement Project
ROG	reactive organic gases
SFPUC	San Francisco Public Utilities Commission
SO_2	sulfur dioxide
TAC	toxic air contaminants
VdB	vibration decibels

A. PROJECT DESCRIPTION

A.1 Project Overview and Location

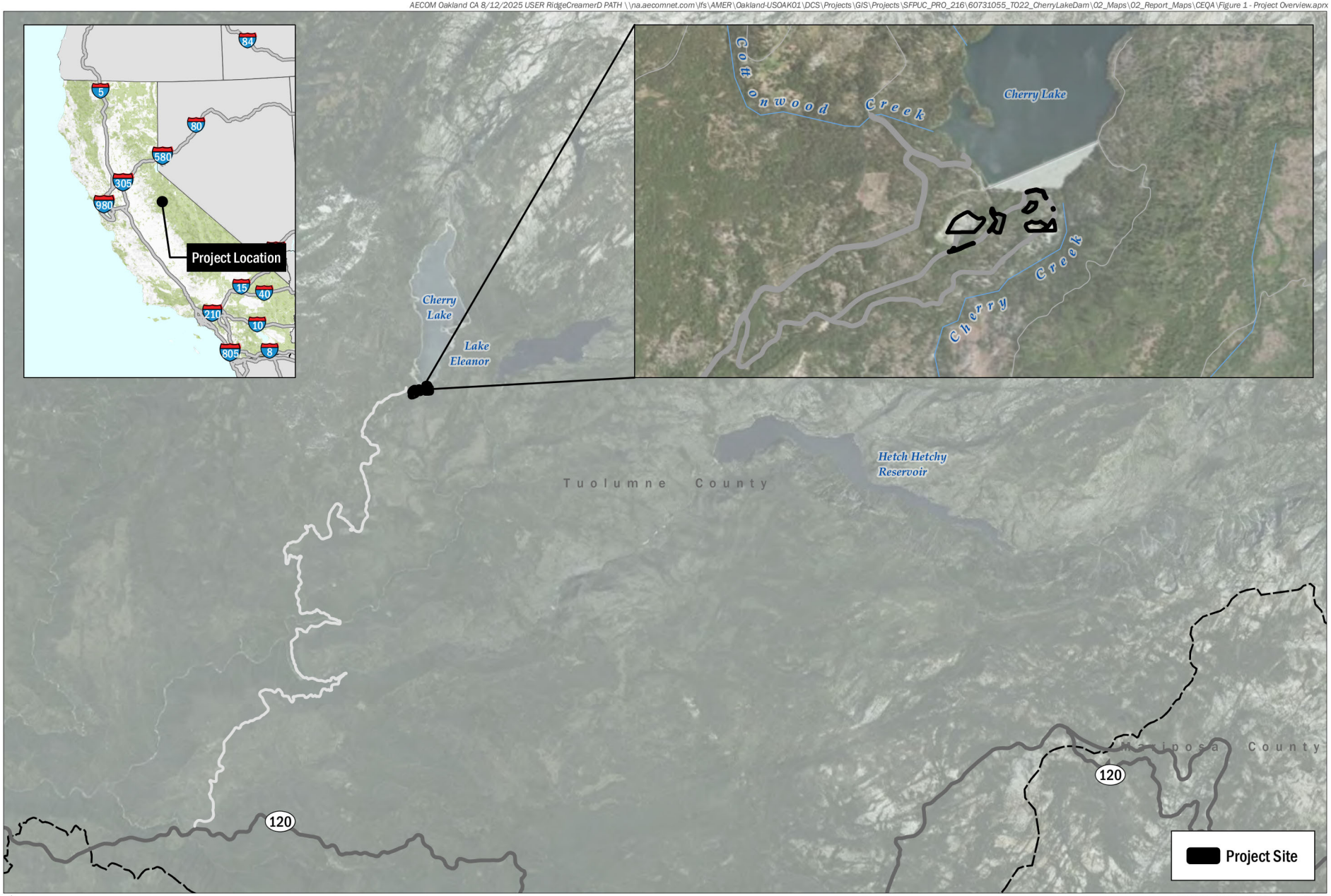
The San Francisco Public Utilities Commission (SFPUC) is proposing the Cherry Valley Dam Spillway Short-Term Improvement Project (project). The project would rehabilitate a segment of the existing unlined spillway discharge channel ("discharge channel") that receives Cherry Valley Dam spillway flows and directs the water toward Cherry Creek, in a generally north-south orientation. Cherry Valley Dam and Lake are west of Lake Eleanor and Hetch Hetchy Reservoir in Tuolumne County, California, approximately 12 miles directly north of California State Route 120 (Highway 120) or 23 miles north via Cherry Lake Road (**Figure 1**).

The dam was constructed in 1956 and includes an overflow concrete weir spillway that discharges into an adjacent, open-flow, lateral waterway that transitions to an unlined discharge channel carrying flows toward Cherry Creek. Debris from landslides on steep side slopes along the discharge channel has obstructed the channel and caused the spillway flows to be diverted toward the east. These flows have since further diverted into a drainage swale, thereby creating a new "east channel."[1] The east channel now carries the flows close to the Cherry Power Tunnel Adit entrance and into public, dispersed camping areas downstream (i.e., farther east, in this case). The project would restore the alignment of the discharge channel to its original north-south orientation, thereby restoring the operational flexibility that is afforded by the spillway that is currently impracticable due to potential flood risk to the Cherry Power Tunnel Adit. The project site consists of a project work area, four road improvement areas, and up to four construction staging areas located south of the dam (**Figure 2**). With the exception of one access road improvement on United States Forest Service land, project activities would be within the City and County of San Francisco's right-of-way and under SFPUC jurisdiction.[2]

[1] Prior to landslides, this drainage swale was much narrower as compared to its current status. This feature is expanded as part of what is presently referred to as the east channel.

[2] The Raker Act (38 Stat. 242) granted rights-of-way to the City and County of San Francisco over Yosemite National Park, Stanislaus National Forest, and public lands in certain counties for multiple purposes, including for constructing, operating, and maintaining aqueducts, canals, ditches, pipes, pipelines, flumes, tunnels, and conduits for conveying water for domestic purposes and uses to the City and County of San Francisco; and for the purpose of constructing, operating, and maintaining roads, trails, bridges, tramways, railroads, and other means of locomotion, transportation, and communication, such as may be necessary or proper in the construction, maintenance, and operation of the works constructed.

AECOM Oakland CA 8/12/2025 USER RidgeCreamerD PATH \\na.aecomnet.com\fs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\SFPUC_PRO_216\60731055_T022_CherryLakeDam\02_Maps\02_Report_Maps\CEQA\Figure 1 - Project Overview.aprx



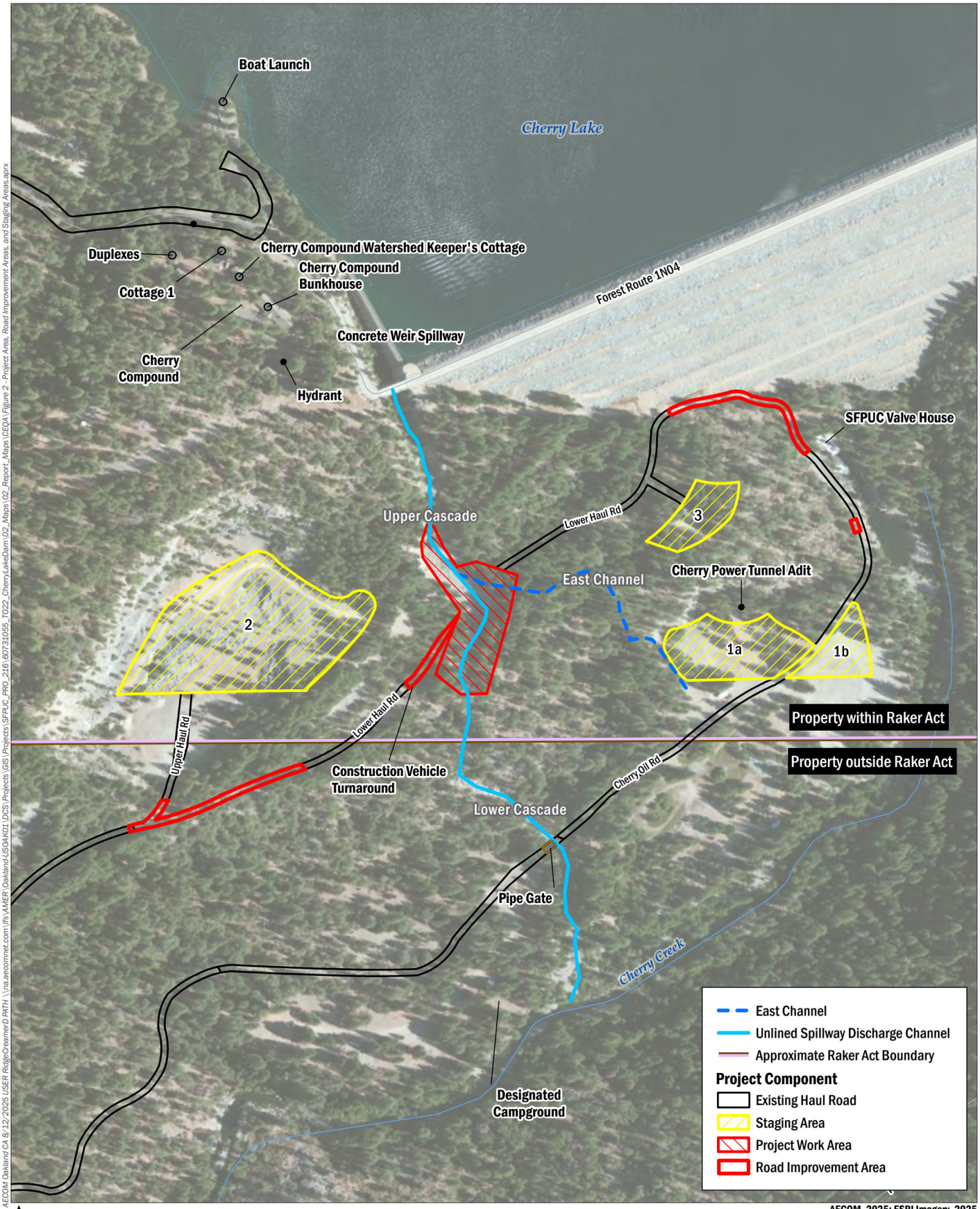
AECOM, 2025; ESRI Imagery, 2025

San Francisco Public Utilities Commission

Cherry Valley Dam Spillway Short Term Improvement Project

FIGURE 1

Project Overview



AECOM Oakland CA 8/12/2025 USER RidgeCreamerD PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\SFPUC_PRO_216\60731055_T022_CherryLakeDam\02_Maps\02_Report_Maps\CEQA\Figure 2 - Project Area, Road Improvement Areas, and Staging Areas.aprx

San Francisco Public Utilities Commission

Cherry Valley Dam Spillway Short Term Improvement Project

FIGURE 2

Project Area, Road Improvement Areas, and Staging Areas

A.2 Project Site and Background

A.2.1 Cherry Valley Dam and Reservoir

Cherry Valley Dam is on Cherry Creek in Tuolumne County, California. It is an earth and rockfill dam with a crest length of 2,350 feet, crest width of 40 feet, and maximum height of 315 feet. The storage volume of Cherry Lake is approximately 268,800 acre-feet with the reservoir level at the spillway crest. Flashboards[3] can be added to the spillway to increase the reservoir storage capacity to approximately 273,500 acre-feet.

The dam is equipped with an outlet works system consisting of a 125-foot-tall, submerged outlet tower[4] and a 1,400-foot-long concrete- and steel-lined tunnel. Where the tunnel is lined with concrete, it has a diameter of approximately 16 feet; and where it is lined with steel, it has a diameter of approximately 15 feet. Water from the reservoir is conveyed through the Cherry Power Tunnel for use by the SFPUC for power generation at Holm Powerhouse. Releases to Cherry Creek from the Cherry Valve House can be diverted into the Lower Cherry Aqueduct, downstream of the dam, for use as a supplemental water supply for the San Francisco Bay region during severe droughts.[5]

A.2.2 Cherry Valley Dam Spillway

Reservoir water levels are primarily adjusted through active releases from the outlet works at the base of the dam. Cherry Valley Dam, however, includes an overflow concrete weir spillway designed to pass flows of up to 52,000 cubic feet per second, with a freeboard[6] of 3 feet. The overflow concrete weir spillway discharges into an adjacent, open-flow lateral waterway that transitions to an unlined spillway discharge channel in the west abutment of the dam (Figure 2). At the downstream end of the chute, the flow cascades down a 100-foot-high granitic slope referred to as the “Upper Cascade.” The discharge channel consists of a relatively straight and narrow channel and chute that transition into a meandering discharge channel (**Figure 3**). The original discharge channel made a slight westerly bend at the bottom of the Upper Cascade and continued southward along a gently sloping channel in the granitic landscape. Near its downstream end, the discharge channel turned about 70 degrees to the southeast; there, the flow would cascade down a 50-foot-high granitic slope (referred to as the “Lower Cascade”) before reaching the alluvial-filled bottom and historical floodplain of Cherry Creek. At the bottom of the Lower Cascade, the flow is generally directed through alluvial sediments to the creek.[7]

[3] Dam flashboards are temporary structures used seasonally to maximize the water level of a reservoir.
[4] The outlet tower is a structure situated in the reservoir that can be used to convey reservoir water through an outlet tunnel to the Cherry Valve House at the downstream toe of the dam. At the valve house, the water can be discharged into Cherry Creek or diverted into the Cherry Power Tunnel.
[5] GEI Consultants, Alternatives Analysis Report (AAR) and Conceptual Engineering Report (CER), Cherry Valley Dam Spillway Short-Term Improvements Project, June 2024.
[6] Freeboard is the vertical distance between the crest of the embankment and the reservoir water surface.
[7] GEI Consultants, Alternatives Analysis Report (AAR) and Conceptual Engineering Report (CER), Cherry Valley Dam Spillway Short-Term Improvements Project, June 2024.



AECOM, 2025

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Cherry Valley Dam Spillway Short Term Improvement Project

FIGURE 3
Cherry Valley Dam Spillway Photograph
(looking downstream southeast from the right bank toward the upper cascade and the discharge channel)

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In October 2010, a spill of about 1,500 cubic feet per second occurred, causing landsliding of the slope on the west side of the Upper Cascade toward the original discharge channel. The debris from the landslide, as well as debris from a previous slide in the same area in the 1990s, obstructed the original channel and redirected the spillway flows to a drainage swale that had been previously disconnected during the original dam and spillway construction. This resulted in the new "east channel." The east channel carries flow eastward before discharging into Cherry Creek, with some amount of flow spilling onto a former construction staging area where the Cherry Power Tunnel Adit entrance is located, and then into public dispersed camping areas nearby. Based on observations during the 2010 spill, spillway flows as low as about 1,500 cubic feet per second pose a potential flood hazard to the Cherry Power Tunnel Adit and public dispersed camping areas downstream of the dam.[8] The project aims to restore and improve the discharge channel and redirect flow away from the Cherry Power Tunnel Adit and camping areas. Multiple design flows were considered by the SFPUC during early project design phases, but a design flow of 2,000 cubic feet per second was identified as optimal because it would provide an appropriate level of operational flexibility while limiting the size of the work area, keep the project within the Raker Act boundary, and reduce the environmental footprint, among other factors.[9]

A.2.3 Project Site

The "project site" collectively refers to all work areas and staging areas, delineated in Figure 2 in red and yellow, respectively. The project includes one project work area to repair the discharge channel and four road improvement areas:

- **Project Work Area.** The approximately 1.3-acre project work area encompasses the segment of discharge channel to be restored. In this location, landslide debris would be removed, an embankment blocking off the east channel would be constructed, and erosion protection measures would be installed. Access to this work area is provided via Lower Haul Road and Cherry Oil Road.

- **Road Improvement Areas.** Four road improvement areas may require site-specific improvements. One area consists of an approximately 535-foot-long segment (0.25-acre work area) along Lower Haul Road to the southwest of the project work area. In addition, improvements and localized widening may be needed in a second segment of Lower Haul Road adjacent to the west side of the project work area. The other two segments are along the portion of Lower Haul Road that extends beyond the eastern terminus of Cherry Oil Road; these segments are approximately 530 feet long (approximately 0.24-acre work area) and 40 feet long (approximately 800-square-foot work area), respectively.

[8] Ibid.

[9] A *long-term* spillway improvement project may be pursued in the future by the SFPUC to provide increased dam safety for extreme precipitation and emergency spill events. The proposed short-term project has independent utility from any potential long-term project, whereby project approval and/or implementation would have no influence on whether a future long-term project is pursued. The proposed short-term project is not mandated by the California Division of Safety of Dams, because the project is not designed to address dam safety requirements or compliance with Division of Safety of Dams regulations. A long-term project, which has not yet been designed, may be proposed to comply with Division of Safety of Dams regulations for a spillway that could safely handle the probable maximum flood storm event and would be subject to individual California Environmental Quality Act review. Furthermore, a potential long-term project is not included in the cumulative projects scenario, because it has not been proposed or designed, and impacts would be speculative.

The project includes up to four potential staging areas:

- **Staging Area 1a.** Past projects used this approximately 1.6-acre area for construction staging activities. It is to the east of the project work area, where the Cherry Power Tunnel Adit entrance is also located, and is currently used for public dispersed camping. The area is flat and sparsely vegetated. Staging area 1a would be accessed via Cherry Oil Road.

- **Staging Area 1b.** This approximately 0.69-acre area is used for public dispersed camping. It is across Cherry Oil Road from staging area 1a. The area is flat and unvegetated and would be used for vehicle parking during construction. Staging area 1b would be accessed via Cherry Oil Road.

- **Staging Area 2.** This approximately 5.22-acre area is an old quarry area (for material used in constructing the dam). It is to the west of the project work area and accessible via an existing road that branches from Lower Haul Road (the branched road is referred to as Upper Haul Road). Staging area 2 would primarily be used for material processing; stockpiling; loading; concrete production; and permanent storage and disposal of surplus excavated landslide debris, embankment materials, and soil and rock that is not needed for the project (referred to as spoils). Materials (e.g., soils and rock) would be hauled from the project work area to staging area 2, where they would be processed and then hauled back to the project work area for use during construction. Excess spoils would be permanently stockpiled in staging area 2 and/or graded to blend with the existing slope of the staging area.

- **Staging Area 3.** This approximately 0.77-acre area is another former staging area used for past projects, including construction of the dam. It is to the northeast of the project work area. Staging area 3 is partly surfaced with a concrete slab, flat, and sparsely vegetated. Access is provided by Cherry Oil Road past staging areas 1a and 1b to the toe of the dam, then uphill along the southern edge of the dam, where it loops around to the west to connect with a remnant of the eastern portion of Lower Haul Road.

A.3 Project Objectives

The primary objectives of the project include the following:

- Provide operational flexibility by restoring and improving a portion of the original spillway discharge channel to allow occasional conveyance of up to the project design flow of 2,000 cubic feet per second to reduce overflows into the east channel and the Cherry Power Tunnel Adit entrance.

- Provide erosion protection along the spillway channel side slopes and the west side (waterside) of the proposed embankment and in an area upstream and adjacent to the toe of the west bank of the Upper Cascade in the proposed work area.

A.4 Project Characteristics

The project includes the following main components:

- **Removal of landslide debris and material processing.** As depicted in **Figure 4**, the project would remove existing debris (e.g., soils, gravels, cobbles, and boulders) that covers the spillway discharge channel to re-expose the original spillway channel's granitic bedrock bottom. This work would involve clearing debris from the bottom of the spillway channel and restoring the channel to allow for flows of up to 2,000 cubic feet per second.

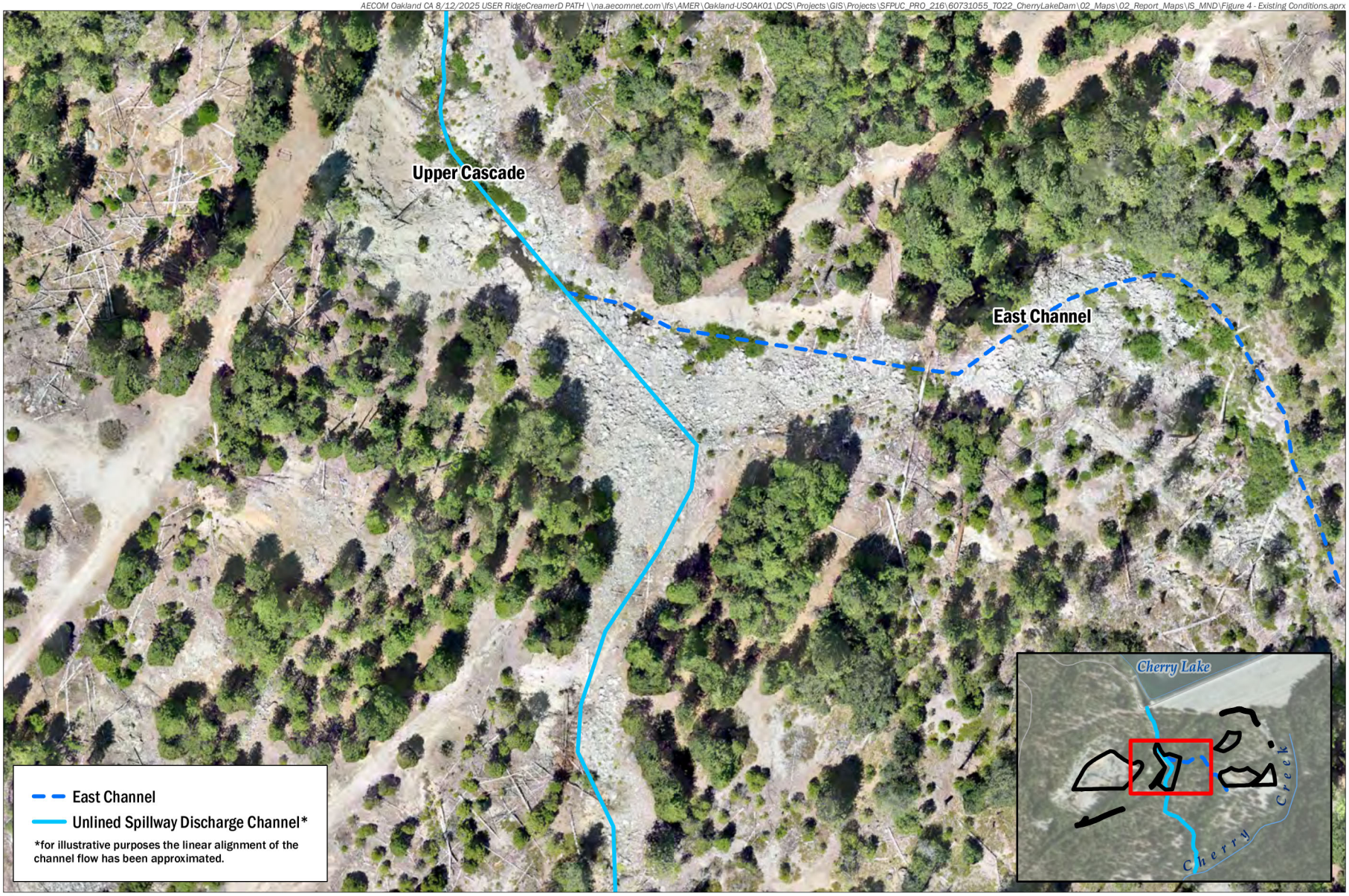
- **Construction of armored fill embankment.** As illustrated in **Figure 5** and depicted as a 3-dimensional rendering in **Figure 6**, an embankment would be constructed across the entrance to the east channel to reestablish flow along the original course of the discharge channel. Construction of the embankment would be performed using excavated landslide debris fill material, as feasible; riprap and boulders, with concrete filling the voids between boulders to provide erosion protection.

- **Erosion protection for side slopes of the discharge channel.** Erosion protection, specifically the placement and grouting of riprap, would be installed along the side slopes of the reestablished spillway channel to allow for discharge flows up to the design flow of 2,000 cubic feet per second. Grouted riprap would also be installed over the toe of the Upper Cascade landslide, at the north end of the project work area, to reduce potential for toe scour, backcutting, and further sliding resulting from spillway flows.

- **Access road improvements**. The road segment southwest of the project work area and the road segment northeast of the project work area are both referred to as Lower Haul Road; Lower Haul Road does not cross the discharge channel (Figure 2). The segment of Lower Haul Road southwest of the project work area requires clearing of downed trees and boulders as well as minor grading and localized placement of aggregate base to restore segments of the road where the existing aggregate surfacing has eroded. The intersection of Upper Haul Road with Lower Haul Road may need localized widening to provide a better turning radius for construction equipment traveling between the spillway and staging area. In addition, a second localized widening (labeled as "Construction Vehicle Turnaround" in Figure 2) may be needed adjacent to the project work area to enable trucks delivering material to the work area to turn around. The project also includes proposed improvements to (1) regrade an unpaved, steeply sloped section of Lower Haul Road along the southern edge of the dam for truck access, and (2) widen another section of the same road south of the valve house, allowing for large equipment access where sloughing of the slope below the road narrowed the road. Widening would be accomplished by limited excavation into the slope on the western side of the road (opposite side of the creek).

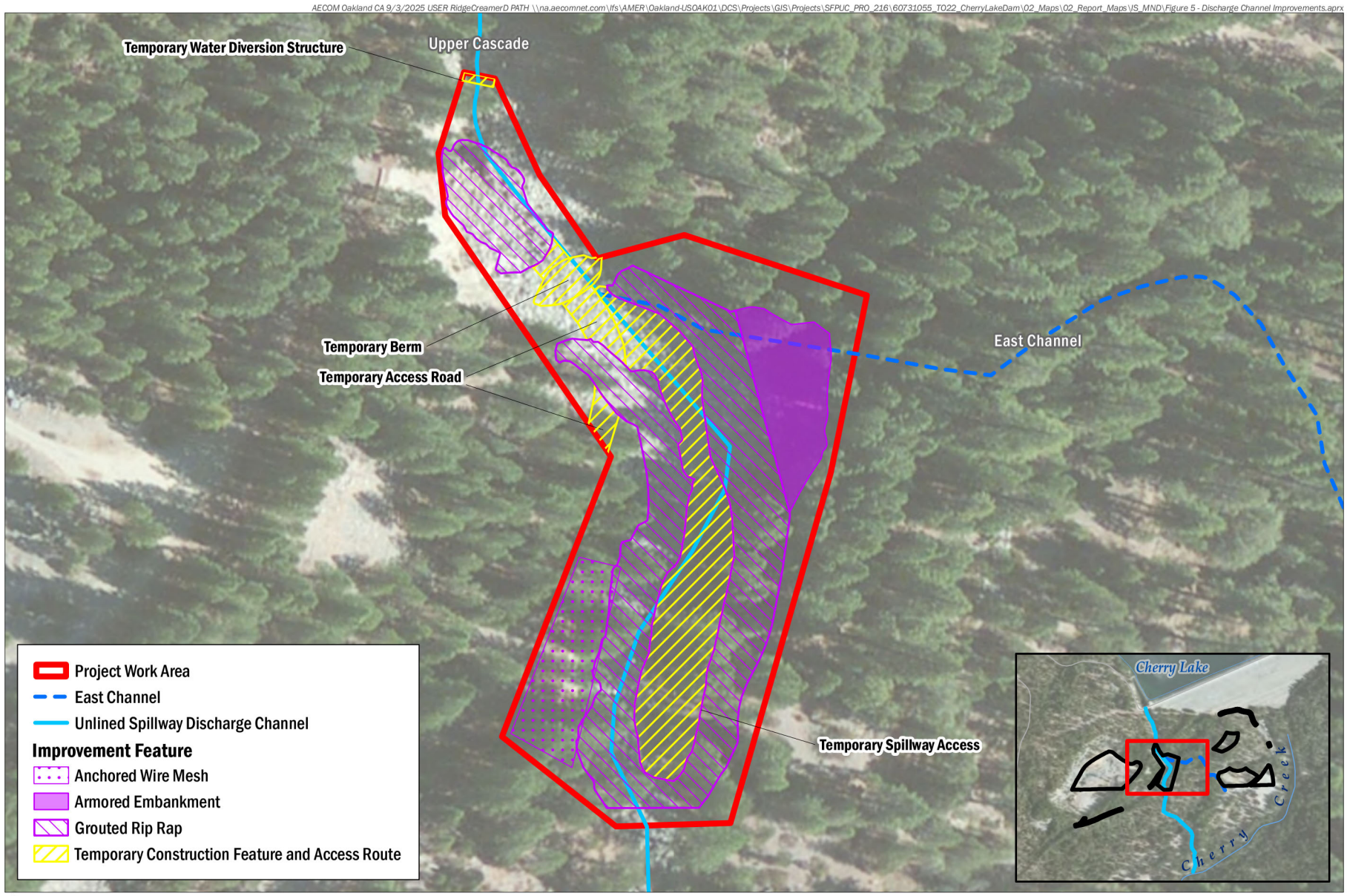
- **Other site preparation activities**. Other site preparation activities include the establishment of staging areas with minor vegetation removal as needed, and clearing of vegetation and tree removal and trimming in the project work and road improvement areas.

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FIGURE 4
Existing Conditions



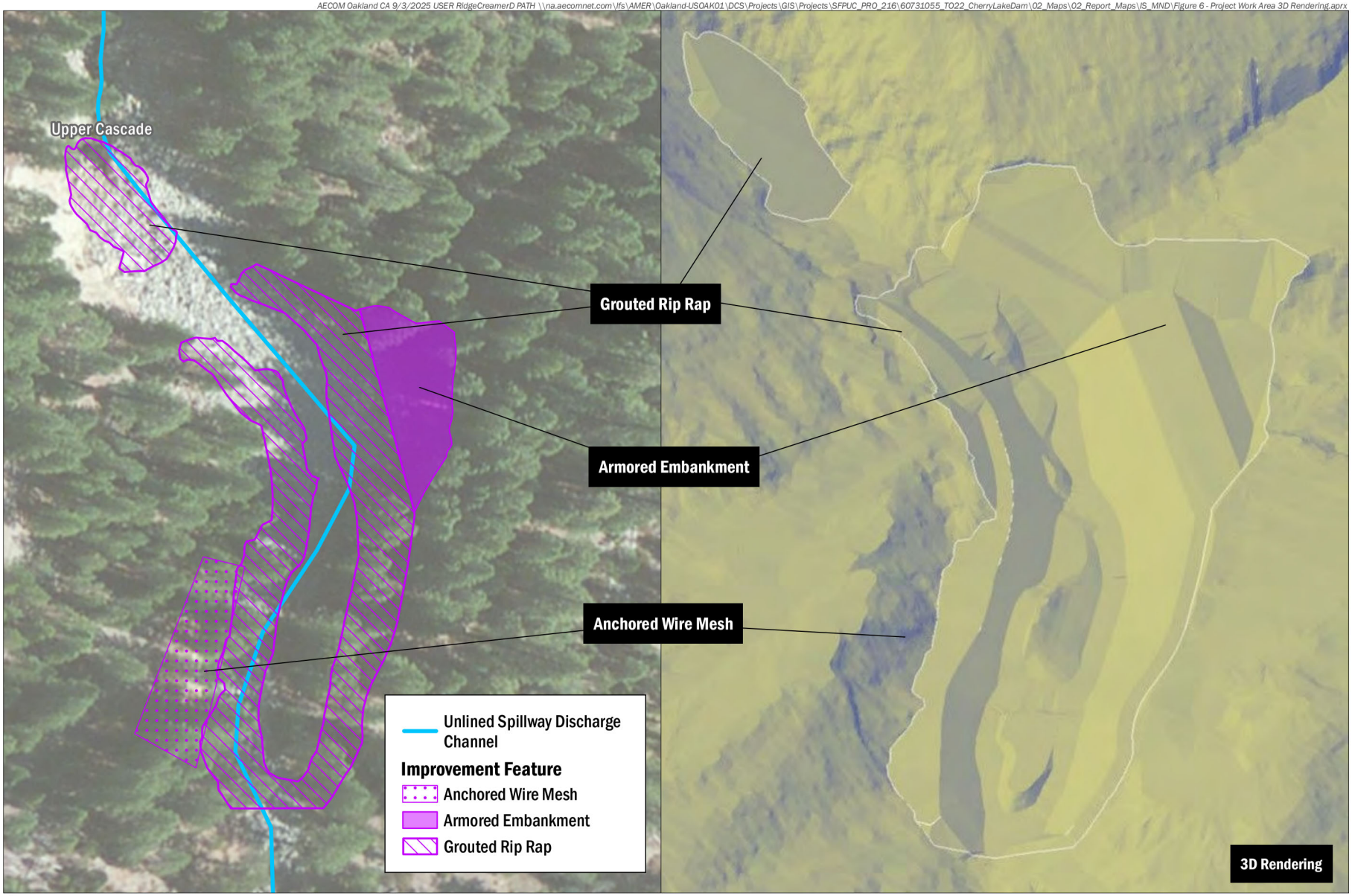
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FIGURE 5

Discharge Channel Improvements

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FIGURE 6

Project Work Area 3D Rendering of Permanent Impacts

A.5 Project Construction

A.5.1 Construction Activities and Phasing

Construction activities would involve the following key phases: site preparation and mobilization, excavation of landslide debris and material processing, embankment construction, erosion protection, and site restoration. Construction activities proposed to occur within each of these phases are described below.

SITE PREPARATION AND MOBILIZATION

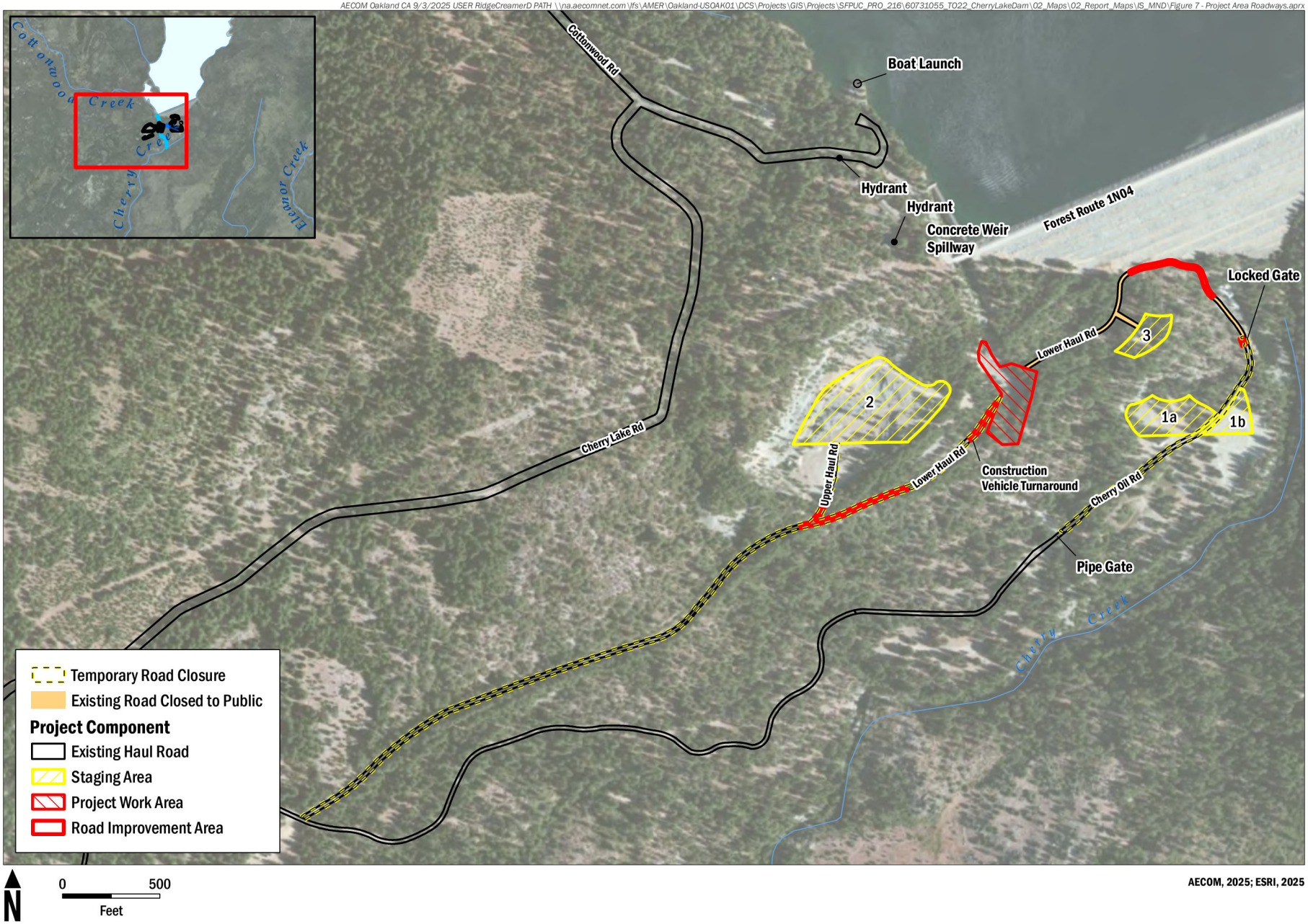
Public Safety Closures

For safety reasons, segments of Upper Haul Road and Lower Haul Road around the project site would be temporarily closed during construction, prohibiting public vehicular access and limiting access for public dispersed camping within or adjacent to SFPUC Raker Act rights-of-way. Use of staging areas 1a, 1b, or 3 would require closure of the segment of Cherry Oil Road east of the existing SFPUC pipe gate[10] to approximately 250 feet past staging area 1b during construction. The remainder of Cherry Oil Road north of this point is normally closed to the public for normal Hetch Hetchy operations. Temporary closure of this segment of Cherry Oil Road may temporarily restrict dispersed camping in those areas within the Raker Act boundary that are accessed via Cherry Oil Road; however, these areas would still be accessible to recreationists by foot. **Figure 7** delineates segments of roadway that would be temporarily closed to public vehicles during project construction. The pipe gate is located where the discharge channel crosses the road (see Figure 2). Recreational camping opportunities would remain open in the formally designated camping area southwest of the pipe gate (identified in Figure 2). Road closures would be coordinated by the SFPUC with the United States Forest Service.

Staging Areas

The SFPUC has deemed all the staging areas to be large enough to accommodate construction office trailers and employee parking, as may be needed for the project. **Table 1** provides a summary of the staging areas, including the type of existing pavement, the need for site preparation (e.g., grading or new aggregate), and proposed use during and after construction. Use of staging areas would not require grading of surfaces, installation of new paved surfaces, resurfacing of any paved surfaces with concrete or asphalt, or changes from pervious to impervious surfaces. Minor vegetation removal activities may be required as part of site preparation.

[10] The SFPUC pipe gate is used to temporarily restrict public access to the discharge channel during normal Hetch Hetchy Water and Power operations and maintenance activities and during periods when water is flowing through the discharge channel and/or the terrain in the area is flooded and considered unsafe for public access. Additionally, the gate is used to restrict public access when areas beyond the gate are needed for construction equipment laydown during routine operations and maintenance work.



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Cherry Valley Dam Spillway Short Term Improvement Project

FIGURE 7

Project Area Roadways and Proposed Roadway Closures

Table 1 Construction Staging Areas and Use

Staging Area Number	Size (approximate acres)	Type of Pavement	Grading/New Aggregate Needed?	Use During and/or After Construction
1a	1.64	None (bare ground)	No	Construction equipment staging and storage, construction vehicle parking, and/or construction office trailers
1b	0.69	None (bare ground)	No	Construction equipment staging and storage, construction vehicle parking, and/or construction office trailers
2	5.22	None (bare ground)	No	Primary use anticipated for material processing; stockpiling; loading; concrete production; and permanent storage and disposal of excavated landslide debris, embankment materials, and spoils. May also be used for construction equipment staging and storage, construction vehicle parking, and/or construction office trailers
3	0.77	Bare ground and concrete slab	No	Construction equipment staging and storage, construction vehicle parking, and/or construction office trailers

Access Road Improvements

Access to the project site is provided from either the south, via Highway 120 and Cherry Lake Road (Forest Route 1N07), or from the west, via California State Route 108 and Cottonwood Road (Forest Route 1N04), to Cherry Oil Road. From Cherry Oil Road, two access routes to the site are identified, one from the southwest and one from the northeast (both referred to as Lower Haul Road). Access along Lower Haul Road would require clearing downed trees and boulders. It would also require minor grading and localized placement of aggregate base to restore an approximate 535-foot-long segment of the road, south of staging area 2 and outside of the SFPUC's Raker Act right-of-way, where the existing aggregate surfacing has eroded. The intersection of Lower Haul Road with Upper Haul Road may need localized widening, including the removal of trees to provide a better turning radius for construction equipment traveling between the project work area and staging area 2. A second localized widening (labeled as "Construction Vehicle Turnaround" in Figure 2) may be needed adjacent to the project work area to enable trucks delivering material to the work area to turn around.

A longer and steeper access route reaching the northeastern corner of project work area is provided via Cherry Oil Road to the toe of the dam, then uphill on an unpaved road along the southern edge of the dam to a separate remnant (segment) of Lower Haul Road on the eastern side of the spillway. Use of this unpaved road may require some limited regrading of a steep reach along the southern edge of the dam in the SFPUC's Raker Act right-of-way. The extent of and need for improvements would depend on the type of equipment that requires access. A tracked excavator or bulldozer would not require improvements, but heavy-duty trucks would not be able to use the road in its current condition.

In addition, a segment of the access road south of the valve house, where sloughing of the slope below the road has narrowed the road, may require widening for large equipment access. Widening would be accomplished by limited excavation into the slope on the western side of the road.

All road improvements would be coordinated, as necessary, by the SFPUC with the United States Forest Service.

Trees and Vegetation Removal

Project implementation would require the removal of up to approximately 315 trees within the project work area, the proposed construction vehicle turnaround at the intersection of Lower Haul Road and the western boundary of the project work area, and the proposed widening area at the intersection of Lower Haul Road and Upper Haul Road. This total includes approximately 240 trees measuring more than 4 inches in diameter at breast height; and 75 immature trees with a diameter at breast height of less than 4 inches. Trees slated for removal are mainly ponderosa pine (204 trees) and incense cedar (104 trees) but also include canyon live oak (two trees), interior live oak (two trees), red willow (two trees), and black oak (one tree). Select trees adjacent to the project work area and/or road improvement areas, and in the staging areas, may require pruning to improve sight distance and/or allow equipment access. Equipment access to staging areas may result in minor vegetation removal. Removed vegetation would be chipped and used for temporary erosion protection measures or as part of site restoration.

Power Supply

Temporary generators would provide power supply for project construction activities. Two temporary generators (one 150-kilowatt generator for powering a stationary processing plant and one 15-kilowatt generator for powering a stationary construction office trailer) would be installed at staging area 2. One portable 15-kilowatt generator would be moved around the project site to support construction work in multiple areas. Under the double-shift scenario (described in Section A.5.3, Construction Schedule, Equipment, and Workforce), six additional 15-kilowatt generators would be used for light towers required during evening hours. It is anticipated that the six light towers would be needed at two locations (four towers in the project work area, and two towers in staging area 2).

Water Supply

Water required for construction (approximately 1.6 million gallons [or 4.91 acre-feet]) would be supplied from the Cherry Lake boat launch area, the valve house, or existing hydrants located within Cherry Compound,[11] using water trucks. Water supply locations are shown in Figure 2. Use of water from the existing Cherry Lake boat launch area would require installation of a water pump near the intake location. Use of water from the valve house may require a new water connection or additional plumbing work (i.e., the installation of a standard fire hydrant connection with a lock to a pressurized line with a Tee [T] valve). Use of water from hydrants at Cherry Compound would not require additional plumbing work. Water required for construction would generate approximately 800 truck trips (averaging approximately one truck per hour during the period of earthwork activities [i.e., road improvements, excavation, embankment construction, erosion protection, and site restoration]) from the water supply source to the project site.

When Cherry Lake is nearly full, a small amount of seepage flow (a few gallons per minute) flows along the spillway channel and into the east channel. To provide a dry work area in the channel, this flow would be captured at the upstream (north) end of the project work area by placing a temporary diversion structure in the form of a small gravel bag cofferdam across the discharge channel. The water would be conveyed by gravity through a hose or plastic pipe passed along the east side of the discharge channel and returned to the east channel farther east of the work area. Alternatively, it may be possible for the Contractor to collect

[11] Cherry Compound refers collectively to auxiliary facilities, including a corporation yard with office and garage, a staging area used by the United States Forest Service fire department, a watershed keeper's cottage, an SFPUC fuel yard, a staging area used by the SFPUC, a cottage and duplexes (rented by Hetchy Operations staff seasonally [May through October]), and a bunkhouse (occupied seasonally by the United States Forest Service fire department).

this water and store it for construction use, thus reducing the volume of water required to be obtained from the above sources. The gravel bag cofferdam would be removed at the end of the work.

Construction Wastewater

Construction wastewater would be minimal. Construction wastewater resulting from washing operations required for the temporary and portable concrete mixing plant would be hauled offsite for disposal. Construction wastewater would be collected, tested for hazardous substances, and disposed of at an appropriate liquid waste facility in either Suisun City or Woodland, California. Water collection could be performed using a portable concrete washout tank or other appropriate liquid waste container.

Water pooled within the project work area, resulting from seepage through the slopes or from precipitation, would be pumped out of the area, tested and treated, as required, and if deemed clean may be used for dust control purposes and discharged to land, as allowed by a permit that SFPUC would obtain from the Regional Water Quality Control Board (i.e., Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality).

Construction Traffic

Access to the project site would occur via either Cherry Lake Road (Forest Route 1N07) or Cottonwood Road (Forest Route 1N04) to Cherry Oil Road. Cherry Lake Road and Cherry Oil Road are paved and well maintained. Cottonwood Road has both paved and unpaved sections. Improvements to Cherry Lake Road, Cottonwood Road, and Cherry Oil Road are not proposed. Signage alerting road users regarding truck and heavy equipment traffic would be posted on Cherry Lake Road, Cottonwood Road, and Cherry Oil Road during material and equipment transport activities.

Lighting and Nighttime Work

As described in Section A.5.3 below, the double-shift scenario for construction phasing would require nighttime work. Temporary lighting for nighttime work would be provided by diesel-powered generators for six portable light towers. It is anticipated that construction activities occurring at the project work area would require four towers, and activities occurring at staging area 2 would require two towers. Lighting towers are not anticipated at any other staging areas or road improvement areas.

EXCAVATION OF LANDSLIDE DEBRIS AND MATERIAL PROCESSING

Landslide debris materials would be excavated using a large hydraulic excavator, which would access the project work area from Lower Haul Road, and a temporary spillway access road would be developed as the excavation proceeds into the channel. The hydraulic excavator would excavate the *key trench*[12] using a hydraulic breaker hammer mounted on the excavator arm. The materials from excavation would be hauled using articulated haulers to a stockpile at staging area 2, where the materials would be passed through a large metal screen to separate the boulders (12-inch or larger rocks) from the smaller sizes (cobbles, gravels, and finer soil). Excavated materials deemed suitable for embankment construction across the east channel would then be hauled back to the embankment area at the time of construction.

Based upon estimated construction quantities, there may be a surplus of approximately 9,000 cubic yards of soil and rock materials generated from excavation that may not be needed for embankment construction or erosion protection (e.g., riprap). Excess soil and rock that are not suitable for embankment fill could be a

[12] A key trench is a trench dug along the bottom of the embankment that provides stability, removing poor quality foundation materials (i.e., unconsolidated topsoil) and allowing for application of erosion protection into stable rock foundation.

source of fill for future SFPUC projects. The surplus materials would be permanently stockpiled at staging area 2 and/or graded to blend with the existing slope in the staging area.

EMBANKMENT CONSTRUCTION

Excavated materials screened and deemed suitable for embankment fill would be hauled from staging area 2 back to the project work area to construct the embankment across the east channel. The mixture of cobbles, gravels, and finer soil would be *moisture-conditioned*,[13] placed in 18-inch loose lifts, and then compacted with a 10-ton smooth steel-wheeled vibratory roller. The boulder-sized particles would be stockpiled and used for riprap.

EROSION PROTECTION

Erosion protection would be provided along the excavated side slopes of the spillway discharge channel, along the western side (i.e., the waterside slope) of the new embankment that crosses the east channel, and over the toe of the Upper Cascade landslide at the northern end of the project work area. Placement of erosion protection would be required around bedrock exposures and irregular shapes; the use of riprap affords flexibility to adapt the protective lining to irregular geometries identified during excavation. Riprap would be obtained from onsite excavation and placed as follows:

- A layer of grouted riprap over a 12-inch-thick layer of well-graded *granular bedding/drainage material*[14] would be placed over the excavated slopes. The thickness of the grouted riprap layer would be 4 feet in the northern portion of the channel (where the channel is steeper and the water velocity is greater), and 3 feet in the southern portion. A key trench would be excavated at the toe of the slope to key in the riprap layer. Drainage pipes passing through the grouted riprap and discharging to the channel would be placed spaced at 6-foot intervals.

- A 4-foot-thick layer of grouted riprap would be placed over the western side (waterside) slope of the proposed embankment, with no bedding layer needed. A key trench would be provided at the toe of the slope.

- A 6-foot-thick layer of grouted riprap would be placed over the toe of the Upper Cascade slide. To reduce the potential for sloughing during construction, no excavation into the existing soils at the slide toe would be made, and the riprap would be placed directly over the existing slope. The toe of the riprap would be confined by the opposite bank, so a key trench would not be needed.

- The grouted riprap concept would allow full use of the range of rock sizes available at the site. The maximum rock size would be approximately 72 inches in diameter, which would be placed at the toe of the slide.

[13] Moisture-conditioning refers to the process of adjusting the moisture content of soil to achieve optimal conditions for construction.
[14] Granular bedding/drainage material, consisting of small, coarse particles like gravel or crushed rock, would provide a stable base for the proposed drainage pipes and allow for ground drainage such that water would not pool around the drainage pipes. The grouted riprap, consisting of large rocks held together by grout, would add additional stability and protection against water forces.

Before placing the riprap, the imported bedding layer would be spread uniformly over the side slopes of the excavated channel. The riprap rock would then be placed to the established lines and grades using a hydraulic excavator. The rock would be placed in one operation, starting from the bottom of the slope and progressing to the top.

Prior to grouting, the rocks would be wetted to rinse off sediment, and free water would be allowed to dissipate into the soil. Rinse water flow would be minimal and would not be allowed to contact existing surface waters. The voids between rocks would then be filled with concrete that would be mixed onsite using a portable mixer discharging to a concrete pump. The concrete pump would be used to pump the concrete into the rock voids for final placement. Grout would be placed in approximately 10-foot-wide sections or panels, starting at the toe of the slope and progressing to the top. The grout would be worked into the spaces between stones using spades, bars, or vibrating equipment. Excess grout would be removed from the top surfaces of the exposed stones and hauled offsite for disposal at a permitted landfill facility.

It is anticipated that all the riprap needed for the project would be obtained from excavated onsite rocks. The granular bedding material, cement, concrete aggregate, and supplemental riprap[15] (if any is needed to complete the erosion protection layer) would be obtained from commercial sources and hauled to the site in trucks and stockpiled at staging area 2.

SITE RESTORATION

After construction activities are completed, construction debris at the project site would be removed. Excess soil and rock materials would be added to existing stockpiles where feasible or placed in piles at staging area 2 and/or graded as described above. Excess construction materials would be hauled offsite. Any areas only temporarily affected by construction, including staging areas and access roads, would be restored to their general pre-construction conditions in accordance with SFPUC requirements.[16]

Where practicable, finished slopes adjacent to the grouted riprap slopes would be covered with mulch, biodegradable erosion control mats, and biodegradable fiber rolls. It is anticipated that the downstream slope of the embankment and the excavated slopes above the riprap layer would be treated in this manner. Flatter disturbed slopes, such as on staging areas and other trafficked areas, would be stabilized by covering with soil, mulch, and biodegradable fiber rolls. Replanting of trees, if necessary, as required by conditions of permitting agencies, may occur at nearby offsite areas, and coordinated with and approved by the United States Forest Service, if applicable. Otherwise, revegetation, including tree planting, is not proposed.

[15] If deemed necessary, supplemental riprap is assumed to be sourced from Sonora, California. For the purposes of this analysis, it is assumed that 1,000 cubic yards of supplemental riprap would be imported, requiring approximately 100 truck trips (round trip), at a frequency of approximately 4 truck trips per day during the site restoration phase.

[16] San Francisco Public Utilities Commission, SFPUC Standard Construction Measures, Memorandum from Harlan L. Kelly, Jr., general manager, to Michael Carlin, Juliet Ellis, Barbara Hale, Kathryn How, Tommy Moala, Steven Ritchie, and Eric Sandler, July 1, 2015.

A.5.2 Construction Material Quantities

Estimated construction material quantities are provided in **Table 2**.

Table 2 Estimated Construction Material Quantities

Construction Activity	Approximate Quantity (Cubic Yards)
Excavation	17,000
Embankment	5,000
Erosion Protection – Granular Bedding	600
Erosion Protection – Grouted Riprap	5,000
Erosion Protection – Concrete/Mortar Grout	2,000

A.5.3 Construction Schedule, Equipment, and Workforce

The SFPUC is considering two options for the scheduling of construction activities, depending on pre-construction conditions and work restrictions: (1) a single-shift scenario, in which work would primarily be performed during the daytime; or (2) a double-shift scenario, in which work would be performed during both the daytime and the nighttime. Construction activities would be phased the same for both options; however, the timing and construction durations would differ. The SFPUC would allow its contractor to work on weekends within the stated working hours for both shift options, if needed to make up for any activity delays. To prepare the site for construction activity to begin in late summer 2026, tree removal could take place in January and February 2026 (ahead of nesting bird season) under both construction shift scenarios.

For the single-shift scenario, construction activities are anticipated to start in June 2026 and extend over a duration of approximately 6 months, as follows:

- Site preparation (including access road improvements) and mobilization – 2 weeks
- Excavation of landslide debris and material processing – 8 weeks
- Embankment construction – 4 weeks
- Erosion protection (placement and grouting of riprap) – 6 weeks
- Site restoration – 3 weeks

For the double-shift scenario, construction activities are anticipated to start in September 2026 and extend over a duration of approximately 4 months, as follows:

- Site preparation (including access road improvements) and mobilization – 2 weeks
- Excavation of landslide debris and material processing – 4 weeks
- Embankment construction – 2 weeks
- Erosion protection (placement and grouting of riprap) – 4 weeks
- Site restoration – 2 weeks

Table 3 illustrates the durations for each activity phase for both the single- and double-shift scenarios.

Table 3 Construction Schedule Options

Project Construction Scenario	Construction Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Single-shift	Site preparation						
	Excavation of landslide debris and material processing						
	Embankment construction						
	Erosion protection (placement and grouting of riprap)						
	Site restoration						
Double-shift	Site preparation						
	Excavation of landslide debris and material processing						
	Embankment construction						
	Erosion protection (placement and grouting of riprap)						
	Site restoration						

For the single-shift scenario, work would be performed primarily during the daytime, Monday through Friday, between the hours of 7 a.m. and 5 p.m. For the double-shift scenario, work following the site preparation phase would be performed during both the daytime and the nighttime, Monday through Saturday, between the hours of 7 a.m. and 10 p.m. For the single-shift scenario, limited weekend work may be scheduled Saturdays and Sundays, between the hours of 7 a.m. and 5 p.m.; for the double-shift scenario, work may occur on Sundays between the hours of 7 a.m. and 10 p.m.

The number of employees onsite at any given time would depend on the activities being performed; they would range from 6 to 10 construction workers. It is estimated that a maximum of 20 employee vehicles, including construction management personnel and inspectors, could be onsite during construction.

Table 4 summarizes the construction activities, equipment, and workforce associated with various components of the project, along with the duration of these activities. Earthwork and other construction activities would require pickup trucks, excavators, dozer, loader, riprap processing plant, and compactor, among other equipment listed in Table 4.

Table 4 Summary of Construction Activities, Equipment, Crew, and Duration

Project Phases	Proposed Construction Activities	Construction Equipment (Quantity)	Construction Crew – Per Shift	Construction Duration – Single-Shift Scenario	Construction Duration – Double-Shift Scenario
Site Preparation				**2 weeks**	**2 weeks**
Mobilization	• Mobilize and set up operations • Prepare staging areas for use • Install temporary fencing and safety markers (cones, signs, etc.), as needed • Install stormwater best management practices, as required by the stormwater pollution prevention plan	• Flat Bed Highway Truck • Pickup Trucks (6) • Loader • Generator[1] (1) (15 kilowatt) for construction trailer(s) for entirety of construction • Generator[1] (1) (15 kilowatt) for miscellaneous use (e.g., use of hand tools) for entirety of construction	6 workers	5 work days (10 hours/day)	5 work days (10 hours/day) (this activity would not be double shifted)
Access Road Improvements	• Remove and chip downed trees and woody debris • Stockpile wood chips in staging area 2 for use during site restoration • Remove and stockpile boulders • Perform grading along the existing access roads • Place imported aggregate base surfacing in areas where it is not sufficiently present	• Pickup Trucks (8) • Dozer (1) • Loader (1) • Excavator (1) • Grader (1) • Compactor (1) • Water Truck (1) • Dump Truck (2) • Wood Chipper (1)	8 workers	5 work days (10 hours/day)	5 work days (10 hours/day) (this activity would not be double shifted)
Site Clearing and Tree Removal	• Trim or remove and chip bushes and standing trees in areas where excavation and fill placement is required • Minor clearing and grubbing • Stockpile topsoil and wood chips in staging area 2 for use during site restoration	• Pickup Trucks (6) • Feller Buncher (1) • Excavator (1) • Wood Chipper (1) • Loader (1) • Dump Truck (1)	6 workers	10 work days (10 hours/day)	3 work days (10 hours/day) (this activity would not be double shifted)

Project Phases	Proposed Construction Activities	Construction Equipment (Quantity)	Construction Crew – Per Shift	Construction Duration – Single-Shift Scenario	Construction Duration – Double-Shift Scenario
Excavation of Landslide Debris and Material Processing				**8 weeks**	**4 weeks**
	• Install temporary protective measures for construction personnel as needed • Excavate landslide debris in spillway channel • Excavate/grade spillway channel side slopes • Excavate key trench • Haul excavated material to staging area 2 • Separate embankment fill material from boulders using large metal screen	• Pickup Trucks (10) • Excavator (2) • Dozer (1) • Loader (2) • Water Truck (1) • Dump Truck (2) • Riprap Processing Plant (1) • Generator (1) (150 kilowatt) to power processing plant • Generator[2] (6) (15 kilowatt) for light towers (*only required for double-shift scenario and assumed use during sunset hours*) for entirety of construction	10 workers	40 work days (10 hours/day)	25 work days (15 hours/day)
Embankment Construction				**4 weeks**	**2 weeks**
	• Haul embankment fill material from staging area 2 to spillway channel • Spread fill materials with dozer and compact in horizontal lifts to construct embankment	• Pickup Trucks (6) • Dump Truck (2) • Water Truck (1) • Loader (1) • Dozer (2) • Compactor (1)	6 workers	15 work days (10 hours/day)	8 work days (15 hours/day)

Project Phases	Proposed Construction Activities	Construction Equipment (Quantity)	Construction Crew – Per Shift	Construction Duration – Single-Shift Scenario	Construction Duration – Double-Shift Scenario
Erosion Protection (Placement and Grouting of Riprap)				**6 weeks**	**4 weeks**
	• Import material for bedding layer and stockpile at staging area 2 • Haul bedding materials from staging area 2 to spillway channel • Spread bedding materials • Haul riprap rock from staging area 2 to spillway channel • Place riprap using excavator • Mix concrete onsite with portable mixer and pump • Grout voids with sand-cement concrete	• Pickup Trucks (10) • Dump Truck (2) • Water Truck • Loader • Dozer • Excavator (2) • Portable Mixer • Concrete Pump	10 workers	30 work days (10 hours/day)	21 work days (15 hours/day)
Site Restoration				**3 weeks**	**2 weeks**
	• Remove temporary measures, including infrastructure for construction personnel, temporary fencing, and signs • Haul construction equipment offsite • Haul construction debris offsite for disposal • Restore or improve areas affected by construction, including staging areas and access roads. This would include temporary erosion protection for areas disturbed by grading, with the application of mulch and placement of biodegradable erosion control mats on slopes, as needed; and replanting of trees at an agreed-on area based on permit conditions and coordinated with the United States Forest Service, if necessary.	• Flat Bed Highway Truck • Pickup Trucks (6) • Loader • Dozer • Water	6 workers	12 work days (10 hours/day)	7 work days (15 hours/day)

Notes:

[1] This generator is included in the site preparation phase but is anticipated for use through the entirety of construction (i.e., through all phases of construction). For the single-shift scenario, construction is estimated to extend for a duration of 6 months, and for the double-shift scenario construction is estimated to extend for a duration of 4 months. To avoid double counting the number of generators, this piece of equipment is only listed in the first construction phase.

[2] These diesel generators would power portable light fixtures, which would be used for temporary lighting for nighttime work, as estimated for the double-shift scenario, which is projected to extend for a duration of 4 months. It is anticipated that six total light towers would be needed at two locations (four towers in the project work area, and two towers in staging area 2). It is assumed that these generators would only be used during dark hours (approximated for the project location and time of year to be an average of 4.4 hours, assumed to be the time of sunset through 10:00 p.m.)

A.5.4 On-Road Construction Vehicles

On-road construction vehicles would include construction worker vehicles, haul trucks, material delivery trucks, and onsite work trucks. The average number of daily workers is anticipated to vary by activity and by construction schedule (i.e., single-shift versus double-shift scenarios or possibly weekend work) (see **Table 5**), with a maximum of 20 worker vehicles onsite. While it is anticipated that each worker would travel to and from the site daily (one round trip per worker per day), workers are not required but may elect to stay within the adjacent public campgrounds (effectively reducing trips by workers who would otherwise be traveling to residential areas farther away). In such cases, workers would provide their own personal temporary camping equipment (e.g., fifth wheel or pop-up trailers) and locate themselves in other publicly accessible camping areas outside of the project site. No temporary or permanent housing accommodations would be provided as part of the project.

Construction trips per construction activity are presented in Table 5. Transport of construction materials assumes use of 18- to 24-foot flatbed trucks. Materials would be delivered to staging area 2, where they would be transferred into smaller trucks for delivery to the project work area.

Table 5 Construction Truck Trips

Activity	Daily Worker Trips (single-shift scenario) (Round Trip)*	Daily Workers Trips (double-shift scenario) (Round Trip)*	Total Number of Truck trips between the Project Work Area and Staging Areas (Round Trip)[1]	Total Number of Vendor Truck Trips (Round Trip)*	Import/Export Quantities (If Applicable)*
Site Preparation and Mobilization	6 to 8	6 to 8	10	25	(not applicable)
Excavation of Landslide Debris and Material Processing	10	20	700	(not applicable)	(not applicable)
Embankment Construction	6	12	200	(not applicable)	(not applicable)
Erosion Protection (Placement and Grouting of Riprap)	10	20	425	360	675 tons of cement, 3,000 tons of concrete sand and aggregate, and 600 cubic yards of riprap bedding to be imported.
Site Restoration	6	12	10	25	Up to 100 cubic yards of construction debris to be hauled offsite for disposal.[2] Additional truck trips included for required equipment/supplies.

Notes:
* Denotes on-road construction truck trips assumed to come from offsite locations.
[1] Truck trips occurring between the project work area and adjacent staging areas would be off-road (e.g., dirt roadways) and primarily completed by articulated haulers between the project work area and staging area 2, the primary location for the storage and processing of materials. Truck trips occurring between the project work area and staging area 2 are required for material processing (i.e., storing and testing), and quantities in the table do not include water truck trips required for construction water supply. Approximately 800 water truck trips (round trip) are estimated for the project, resulting in approximately one trip per hour during earthwork activities.
[2] Offsite disposal is assumed to occur in Sonora, California.

A.5.5 Standard Construction Measures

The SFPUC has adopted standard construction measures to be implemented during construction of every SFPUC project and included in all SFPUC construction contracts, to ensure that environmentally responsible practices are applied to all of its projects (see Appendix A).[17] These standard construction measures include requirements addressing seismic and geotechnical issues, air quality, noise, water quality, traffic control, hazardous materials, biological resources (including special-status species and/or migratory birds), visual and aesthetic considerations, and cultural resources. Because the measures apply to all SFPUC projects—including projects in San Francisco and other urban areas as well as projects in rural and natural areas such as SFPUC watershed lands—the measures are necessarily broad. This being the case, the measures may be tailored to fit specific projects. In addition, these measures may be superseded by more detailed project-specific mitigation measures and/or regulatory permit requirements.

The standard construction measures are required to be implemented pursuant to the construction contract specifications for all SFPUC projects (along with any mitigation measures adopted as part of the review process required by the California Environmental Quality Act). The applicability of the standard construction measures to the project is considered under each related resource topic analysis in this initial study.

A.5.6 Construction Erosion Control Measures

Temporary erosion protection and sediment control measures would be implemented for the project work area, haul roads, and staging/stockpile areas, in accordance with the requirements of a project-specific stormwater pollution prevention plan as approved by the Regional Water Quality Control Board. This may include the installation of a temporary rock berm within the upstream boundary of the project work area. The temporary rock berm would reduce the potential for rocks that may roll down the slopes upstream of the site from entering the project work area. The berm would be constructed by using either a bulldozer and/or an excavator to push or place some of the existing landslide debris toward the upstream end of the project work area. After the excavation and embankment are completed, the temporary rock berm may be removed and the rock material from the berm may be used to form a ramp to provide a path up the channel for a large-tracked excavator to gain access to the toe of the Upper Cascade for the repair work at the north end of project work area. The rock used for the temporary berm and/or access path to the Upper Cascade would be removed prior to the completion of construction.

To protect construction personnel, a rockfall system would be provided along a steep raveling slope that exists above the west side of the spillway channel at the southern/downstream end of the project work area. Anchored rock netting would be installed to reduce the potential for stones and rocks to break out and fall. The existing slope surface would be scaled of loose unstable stones and then covered by steel wire mesh, which would be fastened by small anchors and pretensioned. The steel wire mesh would be left in place after construction to reduce the amount of slope erosion and rock debris falling into the spillway channel.

Additionally, other biodegradable erosion protection measures (e.g., items required as part of the stormwater pollution prevention plan, such as fiber rolls [i.e., fiber logs], straw wattles, straw bales, and timber check berms; chipped woody debris or mulch; biodegradable erosion control mats) could potentially be left in place after construction, as long as they do not affect operational practices, in accordance with

[17] San Francisco Public Utilities Commission, SFPUC Standard Construction Measures, Memorandum from Harlan L. Kelly, Jr., general manager, to Michael Carlin, Juliet Ellis, Barbara Hale, Kathryn How, Tommy Moala, Steven Ritchie, and Eric Sandler, July 1, 2015.

project plans and specifications, and are acceptable to the SFPUC and permitting agencies, as appropriate. As discussed under "Site Restoration" in Section A.5.1, Construction Activities and Phasing, above, where practicable, finished slopes would be covered with mulch and biodegradable erosion control mats. Otherwise, erosion control measures used during construction would be removed and disposed of after construction.

A.6 Project Operations and Maintenance

Project implementation would not include changes to existing, normal operations and maintenance, nor would it include new or additional staff, for Cherry Valley Dam and Spillway. Normal operation of Cherry Valley Dam involves use of a Forecast Informed Reservoir Operations method to predict the level of water in the reservoir and to adjust it, as necessary, by releasing water through the outlet works at the base of the dam. The discharge channel is an overflow feature and is not used for normal, active releases from the reservoir. Rather, project implementation would afford operational flexibility for unique circumstances where Hetchy Operations may elect to release up to 2,000 cubic feet per second into the discharge channel. The project would reestablish the original flow path for conveyance of up to 2,000 cubic feet per second (from what is presently less than 1,500 cubic feet per second) through the discharge channel and eliminate future flow or overflow into the east channel.

A.7 Project Approvals

The following sections list the approvals that may be needed for project implementation.

A.7.1 Federal Agency Approvals

- United States Forest Service Special Use Permit (a standard Federal Land Policy and Management Act Special Use Permit) or a Road Use Permit
- United States Army Corps of Engineers Section 404 Permit
- United States Army Corps of Engineers Water Infrastructure Financing Program approval
- United States Fish and Wildlife Service Endangered Species Act Section 7 consultation
- United States Fish and Wildlife Service Bald and Golden Eagle Protection Act approval

A.7.2 State Agency Approvals

- California Office of Historic Preservation: National Historic Preservation Act Section 106 consultation
- California Department of Fish and Wildlife (Section 1600 Agreement)
- Regional Water Quality Control Board 401 Certification
- Regional Water Quality Control Board General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality
- State Water Resources Control Board National Pollutant Discharge Elimination System General Construction Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities

A.7.3 Local Agency Approvals

- SFPUC adoption of the final mitigated negative declaration, California Environmental Quality Act (CEQA) Findings, and the mitigation monitoring and reporting program
- SFPUC project approval

B. PROJECT SETTING

B.1 Regional Local Setting

The project site—consisting of the project work area, four road improvement areas, and up to four potential staging areas (see details in Section A, Project Description)—is near Cherry Valley Dam and Lake, west of Lake Eleanor and Hetch Hetchy Reservoir in Tuolumne County, California, approximately 12 miles directly north of Highway 120 or 23 miles north via Cherry Lake Road. Access to the project site is provided from either the south, via Highway 120 and Cherry Lake Road (Forest Route 1N07), or from the west, via California State Route 108 and Cottonwood Road (Forest Route 1N04), to Cherry Oil Road. With the exception of one access road improvement on United States Forest Service land (Figure 2), project activities would be within the City and County of San Francisco's right-of-way and under SFPUC jurisdiction.[18]

The project site is approximately 140 miles east of San Francisco and is in a predominantly undeveloped area located south of Cherry Lake Dam. The project work area is characterized by the landslide scar on the western slope of the Upper Cascade. Along the bottom of the discharge channel is bedrock outcrop with landslide debris that presently obstructs the original channel and redirects spillway flow. The channel is surrounded by moderately steep spillway walls and moderately dense to very dense forests of mixed conifer, oak woodland, and pine. The primary development in the area is water infrastructure associated with the Hetch Hetchy Regional Water System, including Cherry Dam which forms Cherry Lake and the associated overflow concrete weir spillway that discharges into the discharge channel and Cherry Power Tunnel Adit entrance, located downstream of the dam. Recreational facilities in the area include scenic viewing areas at and near the dam and public dispersed camping, including a designated campground south of Cherry Oil Road adjacent to Cherry Creek and southwest of the project site.

B.2 Cumulative Projects Setting

A "cumulative impact" results from a project combining with other projects that cause related impacts (CEQA Guidelines section 15130(a)(1)). As permitted in CEQA Guidelines section 15130(b)(1), the cumulative impacts analyses in this Mitigated Negative Declaration employ the list-based approach, a projections approach, or a hybrid of the two, as appropriate. In the list-based approach, a list identifies past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a project. In the projections approach, projections contained in an adopted local, regional, or statewide plan, or related planning document, are summarized to describe or evaluate conditions contributing to the cumulative effect.

Table 6 lists the projects in the project vicinity that could contribute to significant cumulative impacts in combination with impacts of the project; the locations of these cumulative projects are shown in **Figure 8**. Factors considered in identifying projects that could contribute to significant cumulative impacts in combination with impacts of the project include the potential for the cumulative project to result in similar environmental impacts as the proposed project; the geographic scope and location of the cumulative project relative to the proposed project, and the timing and duration of implementation of the projects. A discussion of potential cumulative impacts is included in the individual environmental resource area subsections in Section E, Evaluation of Environmental Effects.

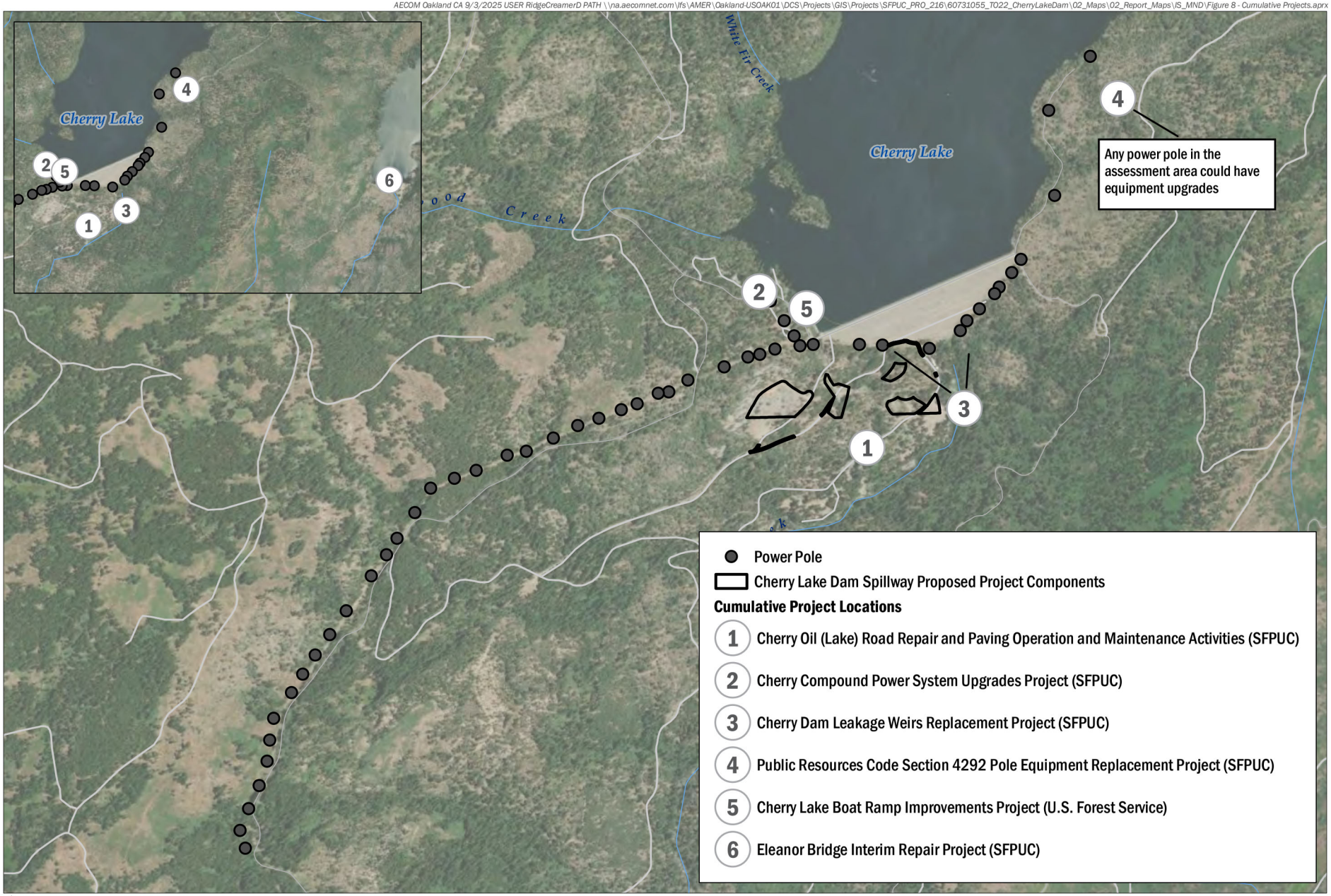
[18] The Raker Act (38 Stat. 242) granted rights-of-way to the City and County of San Francisco over Yosemite National Park, Stanislaus National Forest, and public lands in certain counties for multiple purposes, including for constructing, operating, and maintaining aqueducts, canals, ditches, pipes, pipelines, flumes, tunnels, and conduits for conveying water for domestic purposes and uses to the City and County of San Francisco; and for the purpose of constructing, operating, and maintaining roads, trails, bridges, tramways, railroads, and other means of locomotion, transportation, and communication, such as may be necessary or proper in the construction, maintenance, and operation of the works constructed.

Table 6 Projects Considered in the Cumulative Impact Analysis

Project No.	Project Name (Lead Agency/Project Jurisdiction)	Project Description	Anticipated Construction Schedule
1	Cherry Oil (Lake) Road Repair and Paving Operation and Maintenance Activities (SFPUC)	As part of standard annual operations and maintenance activities, repair and paving activities occur along Cherry Oil Road segments, between the top of the intake hill and Cherry Lake, as determined necessary. Repair activities include clearing culverts, patching and sealing pavements, repairing bridges, clearing debris from road surfaces, correcting drainage deficiencies to reduce erosion, and paving road surfaces.	Occurs annually (typically summer and fall seasons)
2	Cherry Compound Power System Upgrades Project (SFPUC)	This project upgrades the electrical distribution system to improve reliability and promote safe operations. The initial scope includes replacing transformers, conductors, and poles; undergrounding select electrical utilities and pull boxes; and removing abandoned components.	Spring 2022 – Summer 2025
3	Cherry Dam Leakage Weirs Replacement Project (SFPUC)	This project, identified by Hetch Hetchy Water and Power in response to a California Division of Safety of Dams requirement, improves the accuracy of the Cherry Dam leakage monitoring weirs. The project will replace the existing measurement weirs (Weirs 1, 2, 3, and 4) to provide more accurate and standardized readings for the Cherry Lake and Dam facilities.	Summer 2024 (August) – end of 2025 (December)
4	Public Resources Code Section 4292 Pole Equipment Replacement Project (SFPUC)	This project evaluates the current in-service equipment subject to Public Resources Code section 4292 guidance, involving the maintenance of electrical transmission or distribution lines for fire protection. Existing distribution equipment on the Cherry Ridge Line and Mather Line will be evaluated, and if determined necessary, new equipment designed to prevent accidental fire starts in vegetation would be installed.	Winter 2025 (March) – Winter 2026
5	Cherry Lake Boat Launch Improvements Project (United States Forest Service)	This project proposes improvements to the Cherry Lake Boat Launch and resurfacing of segments of gravel roads and trails around the boat launch facility. These improvements are not funded and have not gone through the National Environmental Policy Act (NEPA) process.	Unknown[1]
6	Eleanor Bridge Interim Repair Project (SFPUC)	This project involves repair of the existing Lake Eleanor bridge. Activities include removal of the existing overlay from the deck surface, and cleaning and preparation of an epoxy deck replacement surface. Crack sealant would be placed in any existing cracks, with larger cracks to be treated as spalling and repaired. Additional activities involve repairs on the soffit and other components of the bridge, include spalling, and cracking on the soffit and side faces of the bridge. A polyester polymer concrete overlay would be placed on the prepared and sealed epoxy deck. Minor road widening may be required for a truck turnaround area. This project may require use of the same access roads, staging areas, construction office trailers, and water sources as the proposed project.	Spring 2026 – Fall 2026

Notes:
[1] Proposed improvements have not been funded and have not yet gone through the NEPA process. For these reasons, a rough construction schedule is not assigned.

AECOM Oakland CA 9/3/2025 USER RidgeCreamerD PATH \\na.aecomnet.com\fs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\SFPUC_PRO_216\60731055_TO22_CherryLakeDam\02_Maps\02_Report_Maps\IS_MND\Figure 8 - Cumulative Projects.aprx



San Francisco Public Utilities Commission
Cherry Valley Dam Spillway Short Term Improvement Project

FIGURE 8
Cumulative Projects

As noted in Section A, Project Description, a long-term spillway improvement project may be pursued in the future by the SFPUC to provide increased dam safety for extreme precipitation and emergency spill events, as required and regulated by the California Division of Safety of Dams. However, because such a project is not presently required by regulations, nor has the project been designed, the details of the project are unknown. Without project details, analysis of cumulative impacts would be speculative and, therefore, this project is not further considered in this document.

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	Applicable	Not Applicable
Discuss any variances, special authorizations, or changes proposed to the planning code or zoning map, if applicable	☒	☐
Discuss any conflicts with any adopted plans and goals of the City or region, if applicable	☒	☐
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	☒	☐

This section provides a general description of land use plans and policies that apply to the project and discusses any potential inconsistencies between the project and the applicable plans. Project consistency with a particular plan is decided at the time of project approval by the agency charged with that determination. Land use plans typically contain numerous policies that emphasize differing legislative goals, and an interpretation of consistency requires decision-makers to balance the relevant policies. When it considers approval of a project, the board or commission that enacted a plan or policy determines the meaning of the policy as well as whether an individual project satisfies the policy.

The project site is located in Tuolumne County within Stanislaus National Forest, primarily on property within the City and County of San Francisco's (City's) Raker Act right-of-way and under SFPUC jurisdiction. A small area of the project site—a 0.25-acre road improvement area—is located along Lower Haul Road outside of the Raker Act right-of-way, on United States Forest Service lands. The SFPUC is a department of the City and is therefore under the jurisdiction of the City's charter and plans, where applicable.

The Tuolumne County General Plan designates the project site for public use. The Public designation identifies lands owned by public agencies, such as the Stanislaus National Forest, and recognizes that these lands are exempt from county land use regulations.[19] Therefore, Tuolumne County plans and policies are not discussed further in this section.

C.1 Variances, Special Authorizations, or Proposed Changes to Planning Code or Zoning Map

Because the project lies outside the San Francisco city limits, the City's planning code and zoning map would not apply, and the project would not require variances, special authorizations, or changes to these regulatory instruments, which define use, height, bulk, and other development regulations. The project does not include and would not require variances or changes to the planning codes or zoning maps of any other jurisdictions.

Because the project would involve use of national forest system lands, SFPUC would need to secure special use authorizations from the United States Forest Service. These authorizations are generally not required

[19] Tuolumne County, Draft Recirculated EIR for the General Plan Update Project, *https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report*, August 2018.

where the project lies within Raker Act boundaries. The 1913 Raker Act granted right-of-way to the City over national park, national forest, and unclassified public lands for SFPUC project facilities, including Cherry Valley Dam. The use of National Forest System lands outside of Raker Act right-of-way boundaries requires special use authorization from the federal government. These special use authorizations would not require variances for changes to United States Forest Service land use or zoning maps.

C.2 Conflicts with Adopted City and Regional Plans

City land use plans and policies are primarily applicable to projects within the City's jurisdictional boundaries, although in some cases they may apply to projects outside of these boundaries. The City has authority (San Francisco Charter, section 4.112) over the management, use, and control of land it owns outside of the City boundaries:

> *"The Commission shall have charge of the construction, management, supervision, maintenance, extension, operation, use and control of all water and energy supplies and utilities of the City as well as the real, personal and financial assets, which are under the Commission's jurisdiction on the operative date of this Charter, or assigned pursuant to section 4.132."* (San Francisco Charter, section 8B.121).

Accordingly, the City relies on its own plans and policies with respect to extraterritorial lands, as applicable.

CITY AND COUNTY OF SAN FRANCISCO PLANS AND POLICIES

San Francisco General Plan

The San Francisco General Plan, as amended, sets forth the comprehensive long-term land use policy for the City. The General Plan consists of 10 issue-oriented plan elements that set forth goals, policies, and objectives for the physical development of San Francisco: Air Quality, Arts, Commerce and Industry, Community Facilities, Safety and Resilience, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design. The General Plan elements relevant to the project are briefly described as follows:

- **Safety and Resilience Element:** Addresses the potential geologic, structural, and nonstructural hazards to City-owned structures and critical infrastructure, as well as pandemic hazards and release of hazardous materials, with the goal of protecting human life and property from hazards. This element includes the following policies applicable to the project:
  - **Policy 3.3.2**. Identify and replace vulnerable infrastructure and critical service lifelines in high-risk areas.
  - **Policy 4.2.1**. Ensure potable water is available in an emergency.
  - **Policy 5.1.1.** Ensure the City's lifeline systems are constantly maintained to be in a state of good repair.
- **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 by addressing the City'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.

The proposed improvements would reestablish the original flow path through the discharge channel and eliminate future flow or overflow into the east channel and the Cherry Power Tunnel Adit entrance and public dispersed camping areas. Proposed improvements would provide erosion protection along the spillway channel side slopes in the project work area and restore and improve operational flexibility for conveyance of flow. These objectives do not appear to conflict with the Safety and Resilience Element and its goals to protect human life and property from hazards.

Biological and water quality impacts would be less than significant or mitigated to less-than-significant levels (see Section E.15, Biological Resources, and Section E.17, Hydrology and Water Quality). Therefore, the project would not obviously conflict with the Environmental Protection Element.

Proposition M – 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 San Francisco Planning Code and established eight priority policies. The eight priority policies state that:

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 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 the 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 City 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 space and their access to sunlight and vistas be protected from development.

Of the eight priority policies, Policy 8 is relevant to the project. The remaining seven policies are not relevant because the project would (1) be located outside of San Francisco; (2) be located away from San Francisco neighborhoods; (3) not affect the supply of affordable housing; (4) not result in an increase in commuter traffic or parking needs in San Francisco; (5) not result in commercial office development; (6) not provide any seismic-related repair, afford seismic protections, or exacerbate existing seismic conditions; and (7) not affect landmarks or historic buildings. The project would repair and improve existing infrastructure facilities and therefore would not result in a change in access to sunlight (see Section E.11, Shadow) or obstruct scenic vistas (see Section E.2, Aesthetics, for further discussion); the project would not obviously conflict with Policy 8.

Other San Francisco Plans and Policies

In addition to the general plan and the accountable planning initiative, other City plans and policies that are relevant to the project are as follows:

- The *San Francisco Sustainability Plan*[20] is a blueprint for achieving long-term environmental sustainability by addressing specific environmental issues including but not limited to air quality, climate change, energy, ozone depletion, and transportation. The goal of the San Francisco Sustainability Plan is to enable the people of San Francisco to meet their present needs without sacrificing the ability of future generations to meet their own needs. The plan is divided into 15 topic areas, 10 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 construction wastewater. The other five areas are broader in scope and cover many issues, including the economy and economic development; environmental justice; municipal expenditures; public information and education; and risk management. Under the topic of "water and wastewater" are goals addressing water reuse, water quality, water supply, groundwater supply, and infrastructure. Each topic area has a set of indicators designed for use over time in determining whether San Francisco is moving in a direction that supports sustainability for that area. The *Sustainability Plan for the City of San Francisco* was developed to address the City's long-term environmental sustainability. The project does not appear to conflict with the goals of the plan, because it would improve the reliability of infrastructure that supports water supply for San Francisco.

- The *Climate Action Plan for San Francisco*[21] is a local action plan that examines the causes of global climate change and the human activities that contribute to global warming, provides projections of climate change impacts on California and San Francisco based on recent scientific reports, presents estimates of San Francisco's baseline greenhouse gas (GHG) emissions inventory and reduction targets, and describes recommended actions for reducing the City's GHG emissions. The 2013 Climate Action Strategy is an update to this plan. As discussed in Section E.8, Greenhouse Gas Emissions, the project GHG emissions during construction and operation would not conflict with the City's Climate Action Plan.

SFPUC PLANS AND POLICIES

San Francisco Public Utilities Commission 2020 Strategic Plan

The SFPUC's 2020 Strategic Plan provides a framework for planning, managing, and evaluating SFPUC-wide performance, taking into account the long-term economic, environmental, and social impacts of the SFPUC's business activities. This plan consists of a "Durable Section" that contains goals, objectives, and performance indicators to implement the SFPUC's vision and values. The goals and objectives are then used to drive the plan's "Dynamic Section," which contains specific action items, targets, measures, and budgeting. The SFPUC uses the plan to evaluate its performance semiannually to help measure progress on an annual basis.

By restoring the discharge channel and operational flexibility it affords, the project would improve facilities that are part of the Hetch Hetchy Regional Water System, which would be consistent with the strategic plan's goal to provide reliable service and value to customers. The project also appears to be consistent with

[20] Sustainable City, *http://www.sustainablecity.org/Plan/Intro/intro.htm#PlanHistory*, accessed March 6, 2025.
[21] San Francisco Environment Department, San Francisco Climate Action Plan, *https://www.sfenvironment.org/climateplan*, accessed March 6, 2025.

protection of public health and safety, biological resources, and other key elements of the SFPUC's vision and values as expressed in the strategic plan.

Water Enterprise Environmental Stewardship Policy

Adopted in June 2006, the Water Enterprise Environmental Stewardship Policy established the long-term management direction for City-owned lands and natural resources affected by operation of the SFPUC regional water system within the Tuolumne River, Alameda Creek, and Peninsula watersheds.[22] The provision applicable to the project is the following:

> *"To the maximum extent practicable, the SFPUC will ensure that all operations of the water system (including water diversion, storage, and transport), 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. In cases where we have limited control, but where impacts of its operations exist, we will work with responsible parties to improve ecosystem health."*

The project would improve existing facilities associated with the Hetch Hetchy Regional Water System. All proposed improvements would comply with applicable regulations and would result in less than significant impacts or impacts mitigated to less than significant levels on native species and ecosystem resources (see Section E.15, Biological Resources). As a result, the project would not obviously or substantially conflict with the Water Enterprise Environmental Stewardship Policy.

REGIONAL PLANS

Stanislaus National Forest, Forest Plan Direction

The United States Forest Service completed the Stanislaus National Forest Land and Resource Management Plan (Forest Plan) and Environmental Impact Statement in October 1991. The Stanislaus National Forest "Forest Plan Direction" presents the current Forest Plan management directives.[23] The Forest Plan Direction aims to manage the Stanislaus National Forest's land and resources in combination with present-day environmental and economic challenges and opportunities. The Forest Plan Direction includes forest goals, forest objectives, management goals and strategies, management practices, forest-wide standards and guidelines, management area direction, and land allocations.[24]

The United States Forest Service policies are generally not applicable to SFPUC authorized activities on Raker Act rights-of-way; however, the project would not result in any change of land use in the vicinity of the project and therefore would not obviously conflict with the Forest Plan Direction. The only project element on national forest system lands outside of the Raker Act right-of-way would be minor road surface improvements and widening at the intersection of Lower Haul Road and Upper Haul Road. These actions would be authorized through a Special Use Permit. The project would not interfere with or impede the broad management goals and strategies listed in the Forest Plan Direction that work to enhance old forest

[22] SFPUC, SFPUC Final Water Enterprise Environmental Stewardship Policy, June 27, 2006.
[23] United States Forest Service, Stanislaus National Forest, Forest Plan Direction, March 2017, *https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd535378.pdf*, accessed January 8, 2025.
[24] Ibid.

ecosystems and associated species; aquatic, riparian, and meadow ecosystems and associated species; fire and fuels management; noxious weeds; and lower west side hardwood ecosystems.[25]

C.3 Project Approvals

A list of anticipated approvals needed for project implementation is presented in Section A.7, Project Approvals.

[25] Ibid.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The project could potentially result in adverse physical effects on the environmental resources checked below, and where those impacts are significant or potentially significant, CEQA requires identification of mitigation measures to reduce the severity of the impacts to a less-than-significant level to the extent feasible. This initial study presents a more-detailed checklist and discussion of each environmental resource, unless otherwise noted below.

- ☐ Land Use and Planning
- ☐ Aesthetics
- ☐ Population and Housing
- ☐ Cultural Resources
- ☐ Tribal Cultural Resources
- ☐ Transportation and Circulation
- ☐ Noise
- ☐ Air Quality
- ☐ Greenhouse Gas Emissions
- ☐ Wind
- ☐ Shadow
- ☐ Recreation
- ☐ Utilities and Service Systems
- ☐ Public Services
- ☒ Biological Resources
- ☐ Geology and Soils
- ☐ Hydrology and Water Quality
- ☐ Hazards and Hazardous Materials
- ☐ Mineral Resources
- ☐ Energy
- ☐ Agriculture and Forestry Resources
- ☐ Wildfire
- ☒ Mandatory Findings of Significance

This initial study examines the project to identify its potential effects on the environment. For each item on the initial study checklist, the evaluation has considered the impacts of the project both individually and cumulatively. All items on the initial study checklist that have been checked "Less than Significant Impact with Mitigation Incorporated," "Less than Significant Impact," "No Impact," or "Not Applicable" indicate that, upon evaluation, the planning department has determined that the project could not have a significant adverse environmental effect relating to that issue. A discussion is included for those issues checked "Less than Significant Impact with Mitigation Incorporated" and "Less than Significant Impact," and for most items checked with "No Impact" or "Not Applicable." For all of the items checked "No Impact" or "Not Applicable" without discussion, the conclusions regarding potential significant adverse environmental effects are based upon field observation, staff experience and expertise on similar projects. The items checked above have been determined to be "Less than Significant with Mitigation Incorporated."

E. EVALUATION OF ENVIRONMENTAL EFFECTS

This section includes an analysis of the potential environmental effects of the project. For each resource area, there is a brief discussion of the existing setting, an analysis of the potential impacts, and a determination of significance. Where the analysis finds that mitigation measures would be required, identified mitigation measures are also described.

E.1 Land Use and Planning

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?	☐	☐	☐	☒	☐
b) Cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	☐

Impact LU-1: The project would not physically divide an established community. (No Impact)

The project site is located within the Sierra Nevada Mountain Range in Tuolumne County, California, within Stanislaus National Forest. The nearest towns to the project site are Groveland and Sonora, located approximately 23 miles southwest and 25 miles west of the project site, respectively.

The project involves repair and improvements to a segment of the existing discharge channel that receives Cherry Valley Dam spillway flows and directs the water toward Cherry Creek. The project work area and staging areas are not in or near an established community. Therefore, the project would have *no impact* related to dividing an established community.

Impact LU-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation 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 in the project area. Conflicts with land use plans, policies, and regulations do not necessarily indicate a significant environmental land use impact under CEQA, unless a project substantially conflicts with a land use plan or policy that was adopted for the purpose of avoiding or mitigating an environmental effect such that a substantial adverse physical change in the environment would result. To the extent that physical environmental impacts may result from such

conflicts, the physical impacts are evaluated under the relevant environmental topic sections of this initial study.

As described in Section C, Compatibility with Existing Zoning and Plans, the United States Forest Service plans and policies are generally not applicable to SFPUC authorized activities on Raker Act rights-of-way, and only minor road improvements are proposed outside of the Raker Act right-of-way. However, the project would comply with applicable policies as required by the United States Forest Service special use authorization and would not conflict with the Forest Plan Direction's broad management goals and strategies that work to enhance old forest ecosystems and associated species; aquatic, riparian, and meadow ecosystems and associated species; fire and fuels management; noxious weeds; and lower west side hardwood ecosystems. For further details on the project's effect on these resource topics, see Section E.4, Cultural Resources; Section E.5, Tribal Cultural Resources; Section E.8, Air Quality; Section E.12, Recreation; Section E.15, Biological Resources; Section E.18, Hazards and Hazardous Materials; and Section E.21, Agriculture and Forestry Resources.

As described in Section C, Compatibility with Existing Zoning and Plans, the project would not substantially conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Project consistency with applicable plans, policies, and regulations of agencies with jurisdiction would continue to be analyzed and considered as part of the respective agencies' permit application review and approval process required for the project, independent of CEQA review. Any such potential conflicts would also be considered by decision-makers during their deliberations on the merits of the project and as part of their actions to approve, modify, or disapprove the project. Therefore, the project would have a *less-than-significant* impact regarding conflicts with existing plans, policies, and regulations.

Impact C-LU: The project, in combination with cumulative projects, would not result in a significant cumulative impact related to land use. (Less than Significant)

The geographic scope of the cumulative impact analysis for land use includes the project site and the immediate vicinity. As stated above in Impact LU-1, the project would have no impact related to physically dividing an established community. Therefore, the project would not contribute to a cumulative impact regarding dividing an established community.

With respect to conflicts with applicable land use plans, the cumulative projects identified in Table 6 are all upgrades, repairs, and improvements to existing infrastructure or recreation facilities. Because these projects would not change the existing uses, they would not conflict with the applicable land use plans, policies, or regulations that have been adopted for the purpose of avoiding or mitigating environmental effects. Therefore, cumulative projects in combination with the project would not result in a significant cumulative impact related to compliance with applicable land use plans, policies, or regulations.

For these reasons, cumulative land use impacts would be *less than significant*.

E.2 Aesthetics

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
Aesthetics. Except as provided in Public Resources Code section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐	☐

Impact AE-1: The project would not have a substantial adverse effect on a scenic vista. (No Impact)

The term *vista* generally implies an expansive view, usually from an elevated point or open area. A *scenic vista* is a view that possesses visual and aesthetic qualities of high value to the community. Scenic vistas can provide views of natural features or significant structures and buildings.

The Cherry Creek canyon below Cherry Valley Dam (which includes the project site) is not particularly deep, and the canyon is heavily forested. Rock outcroppings either are not present or do not stand out in the landscape. The canyon is typical of mid-elevation stream-cut valleys throughout the Sierra Nevada and does not comprise a scenic vista.

The project site is situated on a sloping hillside that is heavily forested. Views from all project site locations are generally limited to a distance of a few hundred feet and consist solely of local vegetation (primarily evergreen trees), soil, and boulders. One of the proposed road improvement areas along Lower Haul Road is near the base of Cherry Valley Dam, and thus the view to the north from the road consists of the boulders and rock along the outside of the dam, which appears as an approximately 470-foot-high wall of boulders. The project site does not include any scenic vistas.

To evaluate potential effects of the proposed embankment on surrounding public scenic views, the proposed project work area was staked to mark the extent of the proposed construction activities, and the proposed footprint of the embankment and other discharge channel improvements, including vertical staking used to envision proposed changes to the vertical landscape. Together with, and under the direction of San Francisco Planning Department staff, AECOM subject matter experts visited the project site on September 5, 2024, to confirm public vantage points from surrounding United States Forest Service land and dispersed camping areas. It was determined from the site visit that public views of the discharge channel project work area are largely shielded by the existing hillside, topography, trees (consisting of tall conifers), and boulders. Based on field observations, the proposed embankment would not be visible from any public viewpoints for scenic vistas or other primary publicly accessible vantage points such as the designated campground 1,000 feet southwest of the project site, the top of Cherry Lake Dam, Cherry Oil Road, Cherry Lake Road, or Forest Route 1N14 on the east side of the Cherry Creek canyon.

The top of Cherry Valley Dam serves as a viewpoint for a scenic vista, with views north toward Cherry Lake encompassing a large expanse of water surrounded by forested mountains with granite rock outcrops and tall peaks to the northeast. The project site, which is south of the dam, is not visible from the viewpoints at the top of the dam due to intervening landforms and dense tree cover. Scenic views of the lake and surrounding landscape are also afforded from the Cherry Lake Boat Launch ramp. If water for project construction is obtained from Cherry Lake, a water pump would be installed near the existing boat launch. However, the short-term and temporary presence of water trucks near the boat launch would not block the scenic views for recreationists, and the water level in Cherry Lake would not be substantially reduced (i.e., water drawdown sufficient to cause a "bathtub ring" effect would not occur).

For the above-discussed reasons, the project would have *no impact* on a scenic vista.

Impact AE-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)

There are no designated or eligible state scenic highways in the project vicinity.[26] The nearest state scenic highway is State Route 108, approximately 14 miles northwest of the project site. Highway 120 from Groveland to the western boundary of Yosemite National Park is a Stanislaus National Forest-designated scenic corridor;[27] Highway 120 is approximately 12 miles south of the project site. State Route 108 and Highway 120 are not visible from the project site. As described under Impact AE-1, the project site is typical of mid-elevation stream-cut valleys throughout the Sierra Nevada and does not include unique scenic resources. Therefore, the project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway and there would be *no impact*.

[26] California Department of Transportation, California State Scenic Highways, 2019, *https://dot.ca.gov/programs/design/lap-landscape- architecture-and-community-livability/lap-liv-i-scenic-highways*, accessed February 6, 2025.

[27] United States Forest Service, Stanislaus National Forest Plan Direction, 2017, *https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd535378.pdf*, accessed July 24, 2024.

Impact AE-3: The project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Less than Significant)

The project site consists of a sloping hillside that is heavily forested. Public views of the project site are largely shielded by the existing topography, vegetation cover (consisting of tall conifers), and boulders. These landscape features vary by location and depending on the specific viewpoint, public views of the project site range from less than 100 feet to a few hundred feet. The visual character of the project work area under existing conditions is illustrated in **Figure 9** and **Figure 10**: the east channel looking downstream from the discharge channel is shown in Figure 9,[28] and the discharge channel looking upstream is shown in Figure 10.[29]

Because public views of the project site are substantially limited, requiring close-range viewing (within a few hundred feet), and do not represent focal points from surrounding recreational trails, roads, or designated campgrounds, the changes anticipated to occur within the project site are not considered substantial. Although the project would involve the removal of approximately 315 trees and construction of an embankment in the drainage channel, project implementation is not proposed to result in changes to existing topographical features or surrounding heavily forested areas such that the project would become more visible to surrounding areas or degrade existing visual character or quality of other surrounding public views of the site. Due to the heavily forested nature of the area, even with the necessary removal of trees, there would still be thousands of large trees of the same species for viewing by recreationists. Removal of trees would be considered marginal, and recreationists would be free to select miles of alternative lands surrounding the project site for dispersed camping uses.

At the conclusion of project-related construction activities, the embankment would block off the east channel; it would be covered with riprap along the spillway channel side slopes and the west side (waterside) of the proposed embankment, and in an area upstream and adjacent to the toe of the west bank of the Upper Cascade in the proposed work area (to prevent erosion), as shown in Figure 5. In total, riprap would cover approximately 0.7 acre. Erosion protection along the discharge channel would be achieved through the placement of bedding material covered by grouted riprap. As described under Impact AE-1, the proposed embankment would not be visible from any public viewpoints for scenic vistas or other primary publicly accessible vantage points. The road improvement areas are generally composed of existing compacted materials, and the project would include grading and placement of aggregate base in several areas to prevent future road erosion. Where practicable, finished slopes adjacent to the grouted riprap slopes would be covered with mulch and biodegradable erosion control mats. Flatter disturbed slopes, such as on staging areas, would be stabilized by covering with soil and mulch.

[28] GEI Consultants, Inc., Draft Geotechnical Data Report, Cherry Valley Dam Spillway Short-Term Improvements Project, November 2024.
[29] Ibid.



Figure 9 **Project Work Area Looking Downstream (East Channel to the Left, Discharge Channel to the Right), Existing Conditions**



Figure 10 **Project Work Area Looking Upstream (Discharge Channel), Existing Conditions**

In total, project implementation would require the removal of up to approximately 315 trees at the project site. Tree removal would occur primarily in the project work area, and limited tree removal would occur for localized road widening along Lower Haul Road and Cherry Oil Road north of staging area 1b. The trees to be removed consist primarily of ponderosa pine and incense cedar, which also comprise the majority of tree species in the project site vicinity. Removed vegetation would be chipped and used for temporary erosion protection measures or as part of site restoration. Any areas affected by construction, including staging areas and access roads, would be restored to their general pre-construction conditions such that the areas would continue to be used for the same purposes, in accordance with SFPUC requirements.[30] Upon completion of construction, replanting of trees may occur at nearby offsite areas, if necessary, as required by conditions of permitting agencies. Otherwise, revegetation, including tree planting, is not proposed. However, due to the heavily forested nature of the project site vicinity, tree removal for project construction would not substantially degrade the existing visual character or quality of public views because the project work area is not visible from any public viewpoint, including the designated campground 1,000 feet southwest of the project site, the top of Cherry Lake Dam, Cherry Oil Road, Cherry Lake Road, or Forest Route 1N14 on the east side of the Cherry Creek canyon.

Two of the proposed staging areas (1a and 2) are former quarries that were cut into the hillside to supply rock for Cherry Creek Dam, and the staging areas are surrounded by trees on all sides (**Figure 11** and **Figure 12**). These former quarry areas are occasionally used by recreationists for dispersed camping. Proposed staging area 1b consists of a flat, unvegetated area that is occasionally used for public dispersed camping (**Figure 13**). Proposed staging area 3 (**Figure 14**) consists of a flat benched area that was also created during the original construction of the dam, is also surrounded by trees, and can be used by the public for dispersed camping. No tree removal would occur in these staging areas. Dispersed camping within the project site (including the hillside around the project work area, staging areas, and road improvement areas) would not be permitted during project construction, and public roadway access to these areas would be temporarily closed during construction (see Figure 7). Furthermore, due to the heavily forested nature of the area, even with the necessary removal of trees in the project work area and along Lower Haul Road and Cherry Oil Road, there would still be thousands of large trees of the same species close to recreationists using the former quarries and staging areas for dispersed camping. Finally, the SFPUC would implement its Standard Construction Measure #8 (Visual and Aesthetic Considerations), which requires that all project sites be maintained in a clean and orderly state, construction staging areas be sited away from public view where possible, and upon project completion project sites on SFPUC-owned lands be returned to their general pre-project condition consistent with the SFPUC's Integrated Vegetation Management Policy, other than replanting trees. Therefore, the existing visual character and quality from public viewpoints would not be substantially degraded.

[30] San Francisco Public Utilities Commission, SFPUC Standard Construction Measures, Memorandum from Harlan L. Kelly, Jr., general manager, to Michael Carlin, Juliet Ellis, Barbara Hale, Kathryn How, Tommy Moala, Steven Ritchie, and Eric Sandler, July 1, 2015.



Figure 11 **Proposed Staging Area 1a, Existing Conditions**



Figure 12 **Proposed Staging Area 2, Existing Conditions**



Figure 13 **Proposed Staging Area 1b, Existing Conditions**



Figure 14 **Proposed Staging Area 3, Existing Conditions**

Water required for project construction may be supplied from Cherry Lake using water trucks. If water is obtained from Cherry Lake, a water pump would be installed near the existing boat launch. However, as stated under Impact AE-1, the short-term and temporary presence of water trucks near the boat launch would not detract from the existing visual character or degrade the existing visual quality.

For the reasons discussed in detail above, the project would not substantially degrade the existing visual character or quality of public views of the project site and its surroundings, and this impact would be *less than significant.*

Impact AE-4: The project would not create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area. (Less than Significant)

The project does not include the construction or operation of any structures or facilities that would create daytime glare.

If the single-shift construction scenario is selected, work would be performed during the daytime, and nighttime construction lighting would not be required. If the double-shift construction scenario is selected, temporary lighting for nighttime work would be provided by six portable light towers: four towers at the project work area, and two towers at staging area 2. Work for the double-shift scenario following site preparation would be performed Monday through Saturday between the hours of 7 a.m. and 10 p.m., and work could also occur on Sundays between the hours of 7 a.m. and 10 p.m.

As noted previously, dispersed camping within the project site would be prohibited during project construction. However, recreational access for campers at the designated dispersed campground south of the discharge spillway adjacent to Cherry Creek would be preserved during project construction. This undeveloped camping area is approximately 1,000 feet south of the project work area and staging area 2 and is approximately 200 feet lower in elevation. Heavy forest vegetation consisting of tall evergreen trees is present between the project work area/staging area 2 and the designated camping area adjacent to Cherry Creek.

The Cherry Valley Campground is approximately 0.85 mile north of the project site on the west shore of Cherry Lake, northwest of Cherry Valley Dam. Cherry Compound, which includes the SFPUC watershed keeper's residence and dormitory buildings that are periodically used by the United States Forest Service, is approximately 800 feet north of the project work area and staging area 2, on the west shore of Cherry Lake northwest of Cherry Valley Dam. The Cherry Valley Campground and Cherry Compound are approximately 250 feet higher in elevation than the project work area, and there is a ridgeline between these areas and the project site, along with heavy forest vegetation consisting of tall evergreen trees.

The project site would not be directly visible to recreationists at any of the above camping facilities; however, the short-term and temporary nighttime lighting that would be used at the project site under the double-shift construction scenario could create nighttime skyglow that would reduce the visibility of the night sky for recreationists that choose to camp in locations in proximity to the project site. Although nighttime lighting effects (skyglow) at these facilities could temporarily reduce visibility of the night sky for recreationists, these effects would be short-term and filtered or blocked due to the intervening trees and topography, and recreationists that might be dissatisfied with this temporary effect would be free to move further away or to another location where skyglow would be reduced or not perceived. Furthermore, the SFPUC would implement its Standard Construction Measure #8 (Visual and Aesthetic Considerations), which requires that nighttime lighting be directed away from residential areas and have shields to prevent light spillover effects. For these reasons, sleep disruption from skyglow for recreationists at the campgrounds and

for the inhabitants at Cherry Compound would not result in a significant impact. For an analysis related to sleep disruption from noise for recreationists at the campgrounds and the inhabitants at Cherry Compound, see Section E.7, Noise. Therefore, the temporary use of lighting under the double-shift project construction scenario would not have a substantial impact related to light affecting nighttime views.

Project operation would not involve the use of nighttime lighting. For the reasons described above, the project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area, and this impact would be *less than significant*.

Impact C-AE: The project, in combination with cumulative projects, would not result in a significant cumulative impact related to aesthetics. (Less than Significant)

The geographic scope for potential cumulative impacts related to aesthetics is limited to viewsheds in which multiple project features or facilities can be seen together. The project would have no impact on scenic vistas or state scenic highways. Therefore, the project would not contribute to cumulative impacts on scenic vistas or state scenic highways.

The cumulative projects involve rehabilitation or replacement of existing water infrastructure and electrical lines and power poles in areas that are near the project site, but due to the sloping topography and the heavy forest vegetation consisting of tall evergreen trees, only a few of the power pole replacements would be visible together with the road improvements along Lower Haul Road. Moreover, the electrical facility replacements, replacement of the concrete weirs, and Lower Haul Road improvements would occur in the same locations as the existing facilities and upon completion would appear visually similar to the existing facilities. The SFPUC Lake Eleanor Bridge Interim Repair Project involves work on the bridge that spans the top of Lake Eleanor Dam, in an area of high visual quality; however, due to distance and an intervening ridgeline, the Eleanor Lake project site and the proposed project site cannot be viewed together. The Eleanor Bridge project may use the same construction office trailers and some of the same staging areas and roads as the proposed project; however, given the small size of the workforce associated with the Eleanor Bridge project, the incremental temporary increase in construction activity at these locations would not combine with the project to result in substantial degradation of the existing visual character or quality of the project area. Furthermore, the SFPUC would implement its Standard Construction Measure #8 (Visual and Aesthetic Considerations), which requires that all project sites be maintained in a clean and orderly state; construction staging areas be sited away from public view where possible; and project sites on SFPUC-owned lands be returned upon project completion to their general pre-project condition, consistent with the SFPUC's Integrated Vegetation Management Policy, other than replanting trees. Therefore, the project, in combination with the projects considered in this cumulative analysis, would not result in significant cumulative impacts related to substantial degradation of the existing visual character or quality.

If the double-shift construction scenario for the proposed project were selected, which would require nighttime lighting, cumulative nighttime lighting or glare impacts are not expected because it is not anticipated that any of the cumulative projects that may be constructed concurrently with the proposed project would require nighttime lighting. Furthermore, the SFPUC is the project sponsor for most of the cumulative projects and if nighttime lighting were required for these projects, SFPUC would implement Standard Construction Measure #8 (Visual and Aesthetic Considerations), which requires that nighttime lighting be directed away from residential areas and have shields to prevent light spillover effects such that significant cumulative effects would not occur.

For these reasons, cumulative aesthetics impacts would be *less than significant*.

E.3 Population and Housing

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
POPULATION AND HOUSING. Would the project:					
a) Induce substantial unplanned 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)?	☐	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing?	☐	☐	☐	☐	☒

The project would not displace any existing people or housing units because no people or occupied housing units currently exist at the project site. Therefore, significance criterion 3(b) related to displacement of people or housing units is *not applicable* to the project and is not addressed in this initial study.

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

The analysis considers whether population growth would occur directly or indirectly as a result of implementation of the project, and whether the growth would be considered substantial relative to planned growth in the area. The project would not develop new homes, businesses, roads, or other infrastructure that would directly or indirectly induce population growth. The main objective of the project is to restore the Cherry Valley Dam spillway operational flexibility and to eliminate future spillway flow or overflow into the east channel and the Cherry Power Tunnel Adit entrance. The project would not change the water demand level, or the amount of water supplied to SFPUC customers, and would therefore not result in system expansion or create unplanned development by communities served by the system.

Project construction would take approximately 4 to 6 months. The number of employees onsite on any given day would range from 6 to 10 construction workers. It is expected that the existing workforce within Tuolumne County or region would meet this labor demand created from project construction. Consequently, construction of the project would not induce population growth by attracting many construction workers from outside the region to relocate to the area and would not create substantial demand for additional housing or other facilities and services associated with growth. Project implementation would not result in changes to existing, normal operations and maintenance, and no new permanent SFPUC staff would be needed. Therefore, the project would not substantially affect the local housing and labor markets during construction or operations.

For the reasons described above, construction, operation, and maintenance activities associated with the project would not directly or indirectly induce population growth within the project area, and there would be *no impact*.

Impact C-PH: The project, in combination with cumulative projects, would not result in a significant cumulative impact on population growth or housing. (No Impact)

Because the project would have no population and housing impacts, it would not contribute to any potential cumulative impact on population and housing; therefore, there would be *no impact*.

E.4 Cultural Resources

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code?	☐	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	☐	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐	☐

Impact CR-1: The project would not cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code. (No Impact)

Historical resources are those properties that meet the terms of the definitions in Public Resources Code section 21084.1 and CEQA Guidelines section 15064.5. Historical resources include properties listed in, or formally determined eligible for listing in, the California Register of Historic Resources (California Register) or listed in an adopted local historic register. The term "local historic register" or "local register of historical resources" refers to a list of resources that are officially designated or recognized as historically significant by a local government pursuant to resolution or ordinance. Historical resources also include resources identified as significant in a historical resource survey, meeting certain criteria as identified in CEQA Guidelines section 15064.5. In addition, a property that is not listed but otherwise is determined to be historically significant based on substantial evidence also would be considered a historical resource. Specifically, a property may be considered a historical resource if it meets any of the California Register criteria related to (1) events, (2) persons, (3) architecture, or (4) information potential that make it eligible for listing in the California Register, or if it is considered a contributor to an existing or potential historic district. The significance of a historical resource is materially impaired when a project "demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance."

The *area of potential effects*[31] delineated for the project does not contain any potential resources of the built environment nor any historical resources including any resource listed in article 10 or article 11 of the San Francisco Planning Code. Although no part of Cherry Dam falls within the area of potential effects delineated for the project, the San Francisco Planning Department has determined that Cherry Dam itself is not eligible for listing in either the California Register of Historical Resources or the National Register of Historic Places

[31] The area of potential effects means the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of historic properties. For the purposes of this analysis, the "area of potential effects" is defined as the project site boundaries.

under any criteria.[32] As such, there are no built environment resources in the project's area of potential effects that are considered "historic properties" and/or "historical resources" (listed or eligible to be listed on the National Register of Historic Places and/or the California Register, respectively). As the area of potential effects delineated for the project contains no potential built environment cultural resources, whether they be historic properties, historical resources, or otherwise, the project would have *no impact* on a historical resource pursuant CEQA Guidelines section 15064.5.

Impact CR-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines section 15064.5. (Less than Significant)

The following discussion assesses impacts on archeological resources meeting the requirements for listing as historical resources pursuant to CEQA Guidelines section 15064.5. Impacts on unique archeological resources as described in CEQA Guidelines section 15064.5 and Public Resources Code section 21083.2(g) are also addressed in this section. A "unique archeological resource" is an archeological artifact, object, or site for which it can be clearly demonstrated that—without merely adding to the current body of knowledge—there is a high probability it meets one of the following criteria: (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person (CEQA section 21083.2 [g]). Impacts on archeological resources that do not qualify either for listing on the California Register or as a unique archaeological resource receive no further consideration under CEQA.

Determining the potential for encountering archeological resources is based on relevant factors that include the location, depth, and amount of excavation proposed as well as any recorded information on known resources in the area. The maximum vertical extent of the project's area of potential effects approaches 20 feet below ground surface, corresponding to the removal of landslide debris that covers the discharge channel to re-expose the discharge channel's granitic bedrock bottom.

The inventory[33] of archeological resources performed for the project included reviews of ethnographic and historic literature and maps, archeological base maps and site records, survey reports, and atlases of historic places on file at the Central California Information Center; a review of files held by the United States Forest Service; a Sacred Lands File review and tribal contact list by the California Native American Heritage Commission; Native American notification letters sent by the San Francisco Planning Department to all individuals identified by the California Native American Heritage Commission; and an intensive archeological pedestrian reconnaissance of the entire area of potential effects.

The records search and the literature reviewed, inclusive of materials received from the Central California Information Center and the United States Forest Service, indicated that no previously recorded cultural resources occur within the current area of potential effects delineated for the project.[34] The records search

[32] San Francisco Planning Department, Memorandum to File, Cherry Dam Spillway Short-Term Improvement Project, Case No. 2022-000353ENV. Prepared by Justin Greving, Senior Preservation Planner, April 16, 2025.

[33] AECOM, Historic Context and Archeological Survey Report for the Cherry Valley Dam Spillway Short Term Improvement Project, Tuolumne County, California, 2025.

[34] Archeological site location data is confidential under California Government Code 6254.10 and National Historic Preservation Act, Section 304. Accordingly , only a summary of the records search results are presented herein. The results of the records search are presented in the Historic Context and Archeological Survey Report for the Cherry Valley Dam Spillway Short Term Improvement Project, Tuolumne County, California prepared by AECOM in 2025. Figure 3 in that document clearly shows that no previously identified cultural resources as reported to the Central California Information System and/or the United States Forest Service occur in the area of potential effects delineated for the current project.

results further revealed that the entirety of the current area of potential effects has been subjected to previous inventory efforts. The previously conducted archeological surveys that included all or portions of the current area of potential effects were conducted by United States Forest Service archeologists with Stanislaus National Forest, and it appears that five of the six efforts were associated with timber management. It should also be noted that the Cherry Creek corridor was surveyed by crews from the University of California, Berkeley in 1951, prior to reservoir inundation.

As discussed in Section E.5, Tribal Cultural Resources, no Native American tribal representatives contacted the planning department during the tribal cultural resources notification period and therefore no additional information concerning Native American tribal cultural resources or archeological resources was identified through Native American consultation.

The archeological pedestrian reconnaissance survey identified two historic-era archeological sites within the area of potential effects, as described below. Both sites are associated with the construction and subsequent use of Cherry Dam and Lake (also known as Lake Lloyd) by Hetch Hetchy Water and Power.

P-55-008536. This historic-era archeological site was originally identified by archeologists from the United States Forest Service.[35] According to the original site record completed for P-55-008536, the site consisted of a heavily impacted historic artifact dump containing abundant exposed and buried material (metal cans, metal machinery parts, glass, miscellaneous metal and glass fragments, railroad spikes and railroad line parts, wire, pipes, an insulator, etc.). According to the recorders from the United States Forest Service, the dump had been looted between August 5, 2011, and August 19, 2011; the recorders noted that all the railroad spikes and the horseshoes were absent on their return visit to the archeological resource. As recorded by the United States Forest Service, none of the resource extended into the area of potential effects delineated for the current project.

Many of the historic materials noted by the United States Forest Service, including the glass fragments, tin cans, machinery parts, rail, tools, insulators, cable, wire, and miscellaneous ferrous metal pieces, were observed by AECOM, as was the modern camping debris, but none of the archeological material was found in a manner to suggest a definable “dump” as in an area where debris and trash were routinely discarded. Instead, AECOM located identical debris clearly associated with the building of Cherry Valley Dam and subsequent operation of the facilities as well as modern camping trash extending across the land surface well beyond the area delineated by the United States Forest Service. More specifically, the debris observed by AECOM was found to extend north-northeastward from the original site boundaries across a distance of more than 1,000 feet to the area of the Cherry Power Tunnel Adit, with much of the debris clustered in the washed-out channels and then spread about the plain below and into the current area of potential effects at proposed staging areas 1a and 1b.[36]

The debris observed by AECOM at P-55-008536 was found entangled among and around the large boulders and fallen trees found in the denuded channels, indicating that the material had been washed down during the overflow event. These materials were also found trapped at the bases of trees on the plain below and, in some instances, wrapped around trunks or hanging from limbs. The widespread surface occurrence of the debris that is found intermixed with boulders and deadfalls suggests that this material was washed down in

[35] Ibid.
[36] Ibid.

the 2010 overflow event and therefore represents a secondary deposit rather than an *in situ* dump that was exposed by the flood waters. In no area was an intact archeological deposit identified.

Because this site is composed of materials that were washed down the hill during the flood event, this material represents a secondary deposit and, lacking integrity, the San Francisco Planning Department determined that this site is neither a resource eligible for listing in the California Register nor a unique archeological resource.[37]

Cherry Valley Camp. AECOM also identified and recorded the remnants of the work camp established for the construction of Cherry Valley Dam in proposed staging area 3.[38] The camp, referred to as the "Cherry Valley Camp" in period photographs obtained from the SFPUC archives, was designed as a temporary installation and therefore presumably was dismantled shortly after the completion of the dam in 1956. The Cherry Valley Camp site is composed of two concrete foundations and a pit with pipe framework that are the remains of a temporary work camp established adjacent to the dam construction site. The smaller of the two concrete foundations was reportedly the foundation for the engineer/construction management office. The larger of the two foundations is irregular in shape and was reportedly the foundation for the bunkhouse and dining hall used during construction of the dam. Both foundations were created with multiple pre-poured concrete slabs, each having embedded cable loops to aid in maneuvering the slabs into place. The slabs were moved into position abutting other slabs to make the foundation.

Atop and adjacent to the foundation associated with the engineer/construction management office was a small scatter of tin cans (fewer than 10 specimens) unrelated to the use of the site by the Cherry Valley Dam construction crew. The scatter of several cans spreads off foundation slightly to the south-southeast and appears to be from subsequent visitor camping, as evidenced by a fire ring in association with some of the cans.

A pit was also found at this site, east of the larger foundation (reportedly associated with the bunkhouse and dining hall). The pit measured roughly 12 feet by 12 feet by 6 inches deep, and contained a two-dimensional framework constructed of steel pipes. The function of the pit and framework is unknown, although use as a privy pit cannot be dismissed. The presence of the pipe framework in the pit itself might, however, suggest uses other than as a privy. It was reported informally by Hetch Hetchy staff that a gaging station had been present in this vicinity. It is possible that this framework could have been used to measure water levels in the pit.

The cultural materials observed at the Cherry Valley Camp site, except for the minor amount of cans observed (which were deposited subsequent to the use of the camp, presumably by visitors to Stanislaus National Forest), date to the 1950s, when Cherry Valley Dam was constructed. There is nothing particularly notable about the two foundation slabs, because they appear to be pre-cast and could have been put to use in any arrangement as needs arose, and the pit is of unknown use. Although privy pits often contain refuse that can provide important information to reconstructing historic lifeways, during this mid-20th century period when Cherry Valley Dam was being constructed, it is likely that trash was hauled off rather than disposed of by throwing into a privy (which would cause the pit to fill more quickly and result in the need for

[37] San Francisco Planning Department, Memorandum to File, Cherry Dam Spillway Short-Term Improvement Project, Case No. 2022-000353ENV. Prepared by Allison Vanderslice, Cultural Resources Team Manager, July 10, 2025..

[38] AECOM, Historic Context and Archeological Survey Report for the Cherry Valley Dam Spillway Short Term Improvement Project, Tuolumne County, California, 2025.

a new privy pit to be excavated). If this was a gaging station, there is nothing extraordinary about the measurement of water in a well either from a design perspective or for providing important information on the history of Hetch Hetchy Water and Power's development of Cherry Lake in the 1950s. Two other resources associated with Hetch Hetchy Water and Power operations at Cherry Lake during this period—P-55-006743 (machine shop foundations) and P-55-008169 (Cherry Compound water tanks)—were both determined by the United States Forest Service to be ineligible for listing in the National Register of Historic Places.[39] Therefore, the San Francisco Planning Department determined that the remnants of the Cherry Valley Camp would likewise be ineligible for listing in the California Register. Similarly, the Department determined there is nothing unique about the materials recorded by AECOM at this site.[40]

As neither P-55-008536 nor the Cherry Valley Camp are eligible for listing as historical resources pursuant to CEQA Guidelines section 15064.5, nor are they unique archeological resources as described in CEQA Guidelines section 15064.5 and Public Resources Code section 21083.2(g), no impact on these known archeological resources would occur with project implementation.

However, the potential to expose unknown archeological resources during project construction remains. During construction, the SFPUC would require implementation of its Standard Construction Measure #9 (Cultural Resources) Archeological Measure 1 (Archeological Discovery), which requires distribution of the San Francisco Planning Department archeological resource "ALERT" to construction workers involved in soils-disturbing activities, suspension of ground-disturbing work within 50 feet if a discovery occurs, and evaluation of the discovery by a qualified archeologist. Additional measures would be implemented as required based on the finding of the evaluation, and may include descendant group consultation, other reporting, curation, and public interpretation of results. Because any accidentally discovered archeological resources would be properly evaluated and treated by implementing Standard Construction Measure #9, Archeological Measure 1, the project would not result in a substantial adverse impact on unknown archeological resources. As a result, the project's impact on archeological resources would be *less than significant*.

Impact CR-3: The project would not cause a significant impact on human remains, including those interred outside of formal cemeteries. (Less than Significant)

There are no known human burials or archeological resources that contain human remains in the area of potential effects; however, earth-moving activities associated with project construction could result in direct impacts on previously undiscovered human remains. The project is subject to the provisions of California Health and Safety Code section 7050.5 with respect to the discovery of human remains. Public Resources Code section 5097.98 regulates the treatment and disposition of human remains encountered during construction. The code requires that the SFPUC notify the local coroner, who would notify the Native American Heritage Commission if the remains are determined to potentially be Native American. The Native American Heritage Commission would assign a Most Likely Descendant to provide recommendations to the SFPUC, who would coordinate with the San Francisco Planning Department, on the respectful treatment of the remains. As stated above, SFPUC would require implementation of its Standard Construction Measure #9, Archeological Measure 1, which outlines halt-work and agency notification protocols in the event human remains or other funerary objects are encountered during construction and requires the

[39] Ibid.
[40] San Francisco Planning Department, Memorandum to File, Cherry Dam Spillway Short-Term Improvement Project, Case No. 2022-000353ENV. Prepared by Allison Vanderslice, Cultural Resources Team Manager, July 10, 2025.

development of a treatment plan. Compliance with state regulatory requirements and implementation of Standard Construction Measure #9, Archeological Measure 1 would require that any human remains that might be uncovered during construction are promptly identified and appropriately protected and treated and therefore would minimize the potential for significant impacts on human remains or other funerary objects. As a result, the impact on human remains, including those interred outside of formal cemeteries, would be *less than significant*.

Impact C-CR: The project, in combination with cumulative projects, would not result in a significant cumulative impact on cultural resources. (Less than Significant)

The geographic scope for cumulative cultural resource impacts encompasses areas within or immediately adjacent to the project site. Although built historic resources, archaeological resources, and human remains are often site-specific, two projects that are adjacent to each other can affect the same built historic resource or archeological resource.

As stated above under Impact CR-1, the project would have no impact on historical resources. Therefore, the project would not contribute to any potential cumulative impact on historic resources.

Although the project would not impact known archeological resources, the potential to inadvertently expose an archeological resource during project implementation cannot be dismissed. Likewise, other SFPUC projects within the general vicinity of the project have the potential to inadvertently expose an archeological resource during implementation. In either case, the provisions outlined in the SFPUC's Standard Construction Measure No. 9 would be implemented, thus avoiding any potentially significant cumulative impact to inadvertently exposed archeological resource resources. Therefore, this impact would be *less than significant*.

E.5 Tribal Cultural Resources

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
TRIBAL CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐	☐

Impact TCR-1: The project could result in a substantial adverse impact on a tribal cultural resource as defined in Public Resources Code section 21074. (Less than Significant)

Pursuant to CEQA section 21074, tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that also are either (a) included or determined to be eligible for inclusion in the California Register, or (b) included in a local register of historical resources, as defined in Public Resources Code section 5020.1(k).

There are no known tribal cultural resources at the project site or in its vicinity that are eligible for listing in the California Register or in other historic registers. Similarly, the Native American Heritage Commission review of its Sacred Lands File failed to identify resources of concern to the local Native American community in the project's area of potential effects.

Pursuant to CEQA section 21080.3.1(d), AECOM on behalf of the City and County of San Francisco asked the California Native American Heritage Commission to review its Sacred Land File and provide a list of tribal contacts for the project site vicinity. On December 19, 2024, the California Native American Heritage

Commission responded with the requested list and a finding that its review of the Sacred Land File was negative for sacred lands in the project site vicinity.[41]

Pursuant to CEQA section 21080.3.1(d), on March 7, 2025, the planning department mailed a "Tribal Notification Regarding Tribal Cultural Resources and CEQA" related to this project to Native American tribal contacts identified by the California Native American Heritage Commission.[42] During the 30 -day comment period, no Native American tribal representatives contacted the planning department to request consultation or to identify a potential tribal cultural resource.

Based on previous Native American consultation, the San Francisco Planning Department considers Native American archeological resources to be tribal cultural resources. Although there are no known Native American sites in the vicinity of the project, as detailed in Section E.4, the potential to encounter unknown Native American archaeological resources that are also tribal cultural resources during project excavation activities exists. In the event that project activities were to disturb unknown archeological sites that are considered to be tribal cultural resources, any inadvertent damage would be a potentially significant impact. As discussed in Section E.4, Cultural Resources, the SFPUC Standard Construction Measure #9 (Cultural Resources) Archeological Measure 1 (Archeological Discovery) would be implemented during construction. SFPUC's Standard Archeological Measure 1 outlines protocols for addressing accidental discovery of archeological resources and human remains, including tribal consultation. Therefore, with implementation of Standard Construction Measure #9, Archeological Measure 1, the potential impact on tribal cultural resources would be *less than significant*.

Impact C-TCR: The project, in combination with cumulative projects, would not result in a significant cumulative impact related to tribal cultural resources. (Less than Significant)

The geographic scope for cumulative tribal cultural resource impacts encompasses areas within or immediately adjacent to the project site. While tribal cultural resources are often site-specific, two projects that are adjacent to each other can impact the same potential tribal cultural resource, particularly when two adjacent project areas are both identified as having high or very high Native American archeological sensitivity. Although there are no known tribal cultural resources within the current area of potential effects, the potential to inadvertently expose a tribal cultural resource during project implementation cannot be dismissed. Likewise, other SFPUC projects within the general vicinity of the project have the potential to inadvertently expose a tribal cultural resource during implementation. In either case, the provisions outlined in the SFPUC's Standard Construction Measure #9 (Cultural Resources) would be implemented, thus avoiding any potentially significant cumulative impact to inadvertently exposed tribal cultural resources. Therefore, this impact would be less than significant.

[41] Native American Heritage Commission, Correspondence regarding the Cherry Valley Dam Spillway Project, December 19, 2024.
[42] San Francisco Planning Department, Tribal Notification Regarding Tribal Cultural Resources and CEQA. September 26, 2024.

E.6 Transportation and Circulation

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
TRANSPORTATION AND CIRCULATION. Would the project:					
a) Involve construction that would require a substantially extended duration or intensive activity, the effects of which would create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations; or interfere with emergency access or accessibility for people walking or bicycling; or substantially delay public transit?	☐	☐	☒	☐	☐
b) Create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations?	☐	☐	☐	☒	☐
c) Interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access?	☐	☐	☐	☒	☐
d) Substantially delay public transit?	☐	☐	☐	☐	☒
e) Cause substantial additional vehicle miles traveled or substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow travel lanes) or by adding new roadways to the network?	☐	☐	☐	☒	☐
f) Result in a loading deficit, the secondary effects of which would create potentially hazardous conditions for people walking, bicycling, or driving; or substantially delay public transit?	☐	☐	☐	☐	☒
g) Result in a substantial vehicular parking deficit, the secondary effects of which would create potentially hazardous conditions for people walking, bicycling, or driving; or interfere with accessibility for people walking or bicycling or inadequate access for emergency vehicles; or substantially delay public transit?	☐	☐	☐	☐	☒

This analysis has been prepared in accordance with the San Francisco Planning Department Transportation Impact Analysis Guidelines for Environmental Review.[43] The planning department uses significance criteria

[43] San Francisco Planning Department, Transportation Impact Analysis Guidelines for Environmental Review, October 2019, *https://sfplanning.org/project/transportation-impact-analysis-guidelines-environmental-review-update#impact-analysis-guidelines*, accessed March 14, 2025.

to facilitate the transportation analysis and address the CEQA Guidelines Appendix G checklist, separating the significance criteria into construction and operation. Significance criterion (a) addresses construction impacts and is evaluated in Impact TR-1 below.

Significance criteria (b) through (g) address operational impacts. The project site vicinity is not served by public transit, and therefore criterion (d) is not applicable to the project. The project site is in a rural natural and recreation area, and there are no passenger loading zones, commercial loading zones, or no-stopping/ tow-away zones at or adjacent to the project site; therefore, criterion (f) is *not applicable* to the project. Similarly, there are no occupied structures requiring parking or designated street parking or parking lots at or adjacent to the project site, and the project would not introduce new facilities that would require parking; therefore, criterion (g) is *not applicable* to the project. Significance criteria (b), (c), and (e), are addressed in Impact TR-2 below.

TRANSPORTATION SETTING

Access to the project site is provided from either the south, via Highway 120 and Cherry Lake Road (Forest Route 1N07), or from the west, via California State Route 108 and Cottonwood Road (Forest Route 1N04), to Cherry Oil Road. Highway 120 and State Route 108 are two-lane regional highways approximately 12 miles south and 14 miles northwest of the project site, respectively. Cherry Lake Road and Cherry Oil Road are two-lane paved roadways; Cottonwood Road has two lanes and both paved and unpaved sections.

From Cherry Oil Road, there are two access routes to the project site, one from the southwest and one from the northeast (both referred to as Lower Haul Road) which are unpaved. There is a pipe gate along Cherry Oil Road west of the discharge channel that is used to temporarily limit public access to the area during normal Hetch Hetchy Water and Power operations and maintenance activities and during periods when areas of the spillway are flooded or considered unsafe for public access. Hetch Hetchy operations and maintenance staff lock the gate to restrict the public from crossing the discharge channel when water is flowing and/or the terrain in the area is flooded. Additionally, the gate is used to restrict public access when areas beyond the gate are needed for construction equipment laydown during routine operations and maintenance work.

The project site vicinity is not served by public transit routes or designated pedestrian and bicycle facilities.

Impact TR-1: The project would involve construction that would require a substantially extended duration or intensive activity, but the secondary effects would not create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations; or interfere with emergency access or accessibility for people walking or bicycling; or substantially delay public transit. *(*Less than Significant*)*

Construction activities result in temporary conditions and usually do not result in permanent changes to the transportation circulation network. The San Francisco Guidelines Construction Analysis Screening Criteria Checklist[44] sets forth screening criteria for determining whether further analysis of potential construction impacts is needed. The screening criteria uses a two-step approach that first considers project context. If the project context is such that relatively little travel activity could be disrupted by construction activities, then a detailed construction analysis is not needed. If, however, the project site context includes travel activity

[44] San Francisco Planning Department, Transportation Impact Analysis Guidelines for Environmental Review, Appendix N Construction, October 2019, *https://sfplanning.org/project/transportation-impact-analysis-guidelines-environmental-review-update#impact-analysis-guidelines*, accessed March 14, 2025.

that could be substantially disrupted by project construction activities, then consideration of the duration and magnitude of construction activities is considered to determine if further evaluation is warranted.

The level of travel activity in the project site study area (site context) could include volumes of people walking, bicycling, riding transit, and driving, as well as the presence of transit facilities (routes and/or stops) and emergency service operator facilities. Per the Construction Analysis Screening Criteria Checklist, projects which meet the following context criteria would not result in significant construction-related transportation impacts and do not warrant further analysis:

- the site surrounding is not well-served by multiple other ways of travel (e.g., people walking, bicycling, riding public transit) and may be characterized by a lack of or substandard sidewalks, bicycle facilities, or transit routes or transit stops in the study area such that there would be little interference with modes of travel due to project construction, and

- the amount of demolition would result in less than 20,000 cubic yards of material removed from the site.

Access to the project site from regional highways is served by two primary two-lane local roads (Cottonwood Road and Cherry Lake Road). The project site vicinity is a remote, rural area with generally low traffic volumes. The project site vicinity is not served by public transit routes or designated pedestrian and bicycle facilities, and there are no emergency service operator facilities in the vicinity. The project would require up to 100 cubic yards of construction debris to be hauled offsite for disposal.

The screening criteria also consider the level of intensity of project activities as well as the duration of construction in conjunction with the project site context. Per the Construction Analysis Screening Criteria Checklist, projects with a construction duration of 30 months or less would not result in significant construction-related transportation impacts and do not warrant further analysis. The project's construction duration would be approximately 4 to 6 months.

The project does not exceed the Transportation Impact Analysis Guidelines Construction Analysis Screening Criteria for requiring further evaluation of construction-related transportation impacts and therefore would not result in significant construction-related transportation impacts. The impact would be *less than significant*.

In recognition that the planning department's Transportation Impact Analysis Guidelines were primarily developed to establish a framework for the evaluation of a project's transportation impact in the urbanized environment of San Francisco, and the project site is a rural environment with limited transportation facilities, the following qualitative analysis is provided for informational purposes and further supports the determination that the project's construction-related transportation impacts would be less than significant.

On-road construction traffic would include construction worker vehicles, haul trucks, and material delivery trucks to reach the project staging areas; additional on-site work truck trips would occur between the staging areas and the work areas for materials delivery and water supply. Access to the project site would be via Cottonwood Road or Cherry Lake Road to Cherry Oil Road, and then via two unpaved access routes to the project site from Cherry Oil Road using Lower Haul Road. These roads can accommodate large truck traffic without traffic controls up to the project site; however, large, slow-moving vehicles traveling on Cherry Lake Road require a pilot vehicle.

Public road closures are not anticipated, except for temporary closures of segments of Upper Haul Road, Lower Haul Road, and Cherry Oil Road to facilitate material transport and mobilization, prohibiting public vehicular access within or adjacent to SFPUC Raker Act right-of-way; however, the roads could still be used by pedestrians and bicyclists. These temporary road closures would be coordinated with the United States Forest Service.

The project would generate an estimated 800 water truck trips during construction, averaging one truck per hour during earthwork activities, between the water supply at Cherry Lake, Cherry Compound, or the Cherry Valve House and the project site. As mentioned above, temporary public road closures would occur for segments of Upper Haul Road, Lower Haul Road, and Cherry Oil Road within the immediate project vicinity (see Figure 7), restricting public vehicular use but not bicycle and pedestrian use. Excluding the water truck trips that would be limited to the immediate project site vicinity, the total number of offsite construction truck trips over the project duration is estimated at 410 round trips, equating to approximately 1 to 18 round trips per construction work day. Slower moving heavy-duty trucks may result in occasional delays on local roads, especially during peak tourist season (spring through fall). During construction, SFPUC would implement Standard Construction Measure #4 (Traffic), which requires the implementation of traffic control measures, including the use of flaggers, warning signage, and scheduling of truck trips during non-peak hours when feasible, as well as coordination with local emergency responders to maintain emergency access during construction. These measures would reduce potential conflicts with recreational traffic and local road users and ensure unimpeded emergency vehicle access. As a result, the project would not create hazardous conditions for people walking, cycling, or driving, and any impacts would be *less than significant*.

Impact TR-2: Operation of the project would not result in significant transportation impacts. (Less than Significant)

The project would not affect the long-term use of the transportation system, as it would not increase the capacity of the roadway network or alter the permanent alignment of area roadways. The project would involve minor road improvements along Lower Haul Road consisting of debris removal, placement of aggregate base, and localized widening for construction truck access; these improvements would serve regular users of the road (SFPUC and United States Forest Service staff) as well as recreationists following the completion of construction. The project would not include changes to existing, normal operations and maintenance, nor would it include new or additional staff; consequently, there would be no substantial increase in worker vehicle trips (i.e., vehicle miles traveled). As stated above, the project site vicinity is not served by public transit routes or designated pedestrian and bicycle facilities. Operation of the proposed project would not result in potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations (criterion (b)); interfere with accessibility for people walking or bicycling, or result in inadequate emergency access (criterion (c)); or cause substantial additional vehicle miles traveled or substantially induce additional automobile travel (criterion (e)). As a result, the impact on transportation and circulation would be *less than significant*.

Impact C-TR: The project, in combination with cumulative projects, would not result in a significant cumulative transportation and circulation impact. (Less than Significant)

The geographic area for the analysis of cumulative traffic impacts includes the local roadways from the project site to Highway 120 and State Route 108 that would be used for short-term construction-related trips. Construction of the proposed project and cumulative projects could result in a significant cumulative transportation impact if combined construction activities would result in potentially hazardous conditions

or interfere with access for motorists and emergency vehicles. The proposed project's construction timeline could overlap with other projects identified in the cumulative project list, including the Cherry Oil (Lake) Road Repair and Paving Operation and Maintenance Activities, Public Resources Code Section 4292 Pole Equipment Replacement Project, and Eleanor Bridge Interim Repair Project. These projects could temporarily increase traffic along the same roadways used for project access; however, these construction-related traffic increases would be short term. The SFPUC is the sponsor of the proposed project as well as the three cumulative projects which could be constructed concurrently. For each of these projects, the SFPUC would implement its Standard Construction Measure #4 (Traffic), which includes traffic control measures such as flaggers, construction warning signage, and coordination with local emergency responders, to maintain traffic circulation and emergency access during construction. Therefore, the project in combination with cumulative projects would not result in significant cumulative impacts during construction related to hazardous transportation conditions or interference with access.

Project operations would not result in new vehicle trips, and therefore the project would not contribute to any potential cumulative transportation impacts during operation.

For these reasons, cumulative traffic impacts on traffic and circulation would be *less than significant*.

E.7 Noise

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
NOISE. Would the project result in:					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or 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, expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☐	☒

The project site is not located within an airport land use plan area or in the vicinity of a private airstrip. Therefore, significance criterion (c) is *not applicable* to the project.

NOISE PRINCIPLES AND DESCRIPTORS

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Because sound pressure can vary greatly within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. When assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as

A-weighting and is expressed in units of A-weighted decibels (dBA).[45] Frequency A-weighting is typically applied to community noise measurements.

NOISE EXPOSURE AND COMMUNITY NOISE

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, nearby motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise effects. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq}: The L_{eq}, or equivalent sound level, is used to describe noise over a specified period of time in terms of a single numerical value; the L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the average sound level.

L_{max}: The maximum, instantaneous noise level experienced during a given period of time.

L_{min}: The minimum, instantaneous noise level experienced during a given period of time.

L_{dn}: Also termed the day-night average noise level (DNL), the L_{dn} is the average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dB to measured noise levels between the hours of 10 p.m. and 7 a.m. to account for greater nighttime noise sensitivity.

CNEL: CNEL, or Community Noise Equivalent Level, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dB to measured noise levels between the hours of 7 p.m. and 10 p.m. and after an addition of 10 dB to noise levels between the hours of 10 p.m. and 7 a.m. to account for greater noise sensitivity in the evening and nighttime, respectively.

NOISE FROM MULTIPLE SOURCES

Because sound pressure levels, in decibels, are based on a logarithmic scale, they cannot be combined in an additive fashion. When a new noise source is added to an existing noise source, with both producing noise at the same level, the noise-level value would not double, as would be the case when adding arithmetically.

[45] All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

Decibel additions from multiple noise sources can be estimated when the noise levels from two simultaneously operating sources are known. If the difference between the two noise sources is 1 dB or less, the resultant noise level will be 3 dB greater than the source with the higher decibel value. If the difference between the two noise sources is 2 to 3 dB, the resultant noise level will be 2 dB greater than the source with the higher decibel value. If the difference between two noise sources is 4 to 10 dB, the resultant noise level will be 1 dB greater than the source with the higher decibel value. When the difference between two noise sources is 10 dB or more, the source with the higher decibel value will dominate, and the resultant noise level will be roughly equal to the source with the higher decibel value.

EFFECTS OF NOISE ON PEOPLE

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people include subjective effects (e.g., dissatisfaction, annoyance), interference effects (e.g., communication, sleep, and learning interference), physiological effects (e.g., startle response), and physical effects (e.g., hearing loss). With regard to increases in A-weighted noise level, the following relationships generally occur:

- Except in controlled laboratory experiments, a change of 1 dB cannot be perceived;
- Outside of the laboratory, a 3 dB change in noise levels is considered to be a barely perceivable difference;
- A change in noise levels of 5 dB is considered to be a readily perceivable difference; and
- A change in noise levels of 10 dB is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Since the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

VIBRATION AND GROUNDBORNE NOISE

Vibration is an oscillatory motion through a solid medium. Typically, groundborne vibrations generated by man-made activities attenuate rapidly with the distance from the source of the vibration. The effects of vibration on structures are typically measured by peak particle velocity (PPV) in inches per second (in/sec). The PPV is most frequently used to describe physical vibration effects on buildings. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick people), and vibration-sensitive equipment.

Vibration decibels (VdB) is the unit used to assess effects of vibrations on people and to distinguish vibration decibels from sound decibels (dB). With the exception of long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. People may tolerate infrequent, short-duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. High levels of vibration can damage fragile buildings or interfere with sensitive equipment. Depending on the age

of the structure and type of vibration (transient, continuous, or frequent intermittent sources), vibration levels as low as 0.5 to 2.0 in/sec PPV can damage a structure.[46]

Groundborne noise refers to noise generated by vibrations from outside a structure but experienced inside the structure. Groundborne noise can be a problem in situations where the primary airborne noise path is blocked, such as in the case of a subway tunnel passing near homes or other noise-sensitive structures. The effects of groundborne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. The Federal Transit Administration (FTA) measure of the threshold of architectural damage for modern reinforced structures is 0.5 in/sec PPV.[47]

A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.[48]

EXISTING NOISE ENVIRONMENT

The project site is in a rural setting. The surrounding environment is primarily undeveloped, with some access roads and recreational areas, including public dispersed camping sites near the proposed staging areas. The ambient noise environment in the project site vicinity consists of natural sounds such as wind, water flow, and wildlife (e.g., bird calls), with occasional noise from human activities, such as camping and maintenance work along access roads. Typical ambient noise levels are generally low during the day, ranging from approximately 30 to 35 dBA.[49] The nearest potential noise-sensitive receptors are located within Cherry Compound (location delineated in Figure 2). These include the watershed keeper's cottage, which is a permanent residence located approximately 1,000 feet northwest of the project work area and 850 feet north of staging area 2; and the Cherry Compound bunkhouse, a transient lodging used by the United States Forest Service for only a portion of the year, located approximately 900 feet northwest of the project work area and 700 feet north of staging area 2. Additionally, recreational camping opportunities exist in the formally designated camping area that is approximately 800 feet south of the project work area.

Impact NO-1: The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant)

The primary noise sources during project construction would be associated with the following activities:

- tree trimming and removal and tree waste processing, involving use of chains saws and heavy equipment such as a wood chipper;
- debris removal and material processing using heavy equipment such as excavators, loaders, and haul trucks;

[46] California Department of Transportation, Transportation and Construction Vibration Guidance Manual, September 2020.
[47] Ibid.
[48] Ibid.
[49] Based on existing noise exposure estimations for population densities of 1 to 100 as stated in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual (2018).

- construction of the armored fill embankment, involving excavation and placement of riprap and concrete;
- erosion protection installation, including riprap placement and grouting;
- access road improvements, which would involve clearing, grading, and localized widening; and
- use of staging areas, where construction vehicles and equipment would be stored and maintained.

Tuolumne County does not have any noise level limits applicable to construction activities and generally focuses on defining noise level limits for permanent/stationary noise sources. In the absence of applicable noise impact criteria at the local level, and considering that the project would be executed by the SFPUC, the assessment of construction impacts relies on criteria applicable to projects in the City of San Francisco, summarized below.

- **Daytime:** Generation of noise greater than 80 dBA at 100 feet from an individual piece of equipment, 90 dBA 1-hour L_{eq} (hourly-equivalent sound level) at a noise-sensitive receptor, or 10 dBA above background noise levels at any noise-sensitive receptor.
- **Nighttime:** Generation of noise greater than 45 dBA at noise-sensitive receptors where people sleep. For building-receptors, windows are assumed open.[50] No exterior noise reduction adjustment is made for campground uses. Additionally, noise greater than 5 dBA above the ambient measured at the nearest property line will be evaluated. In cases where no property line exists, nighttime noise will be evaluated at the receptor building façade or presumed tent location.

Construction activities associated with the project would involve a range of heavy equipment used for vegetation removal, debris clearing, channel regrading, embankment construction, erosion protection installation, site restoration, and road improvements. Each type of equipment generates varying noise levels depending on engine size, load, operating mode, and distance from the source. The two loudest pieces of equipment to be used in any one phase are a grader (generating 85 dBA L_{max}/81 dBA L_{eq} at 50 feet) and a dozer (82 dBA L_{max}/78 dBA L_{eq} at 50 feet).[51] Summed together, the simultaneous operation of these pieces of equipment during the worst-case phase would reach 83 dBA, L_{eq} at a distance of 50 feet.

As noted above, the nearest noise-sensitive receptors are the watershed keeper's residence located approximately 1,000 feet northwest of the project work area and 850 feet north of staging area 2; and the Cherry Compound bunkhouse, a transient space used by the United States Forest Service for only a portion of the year, located approximately 900 feet northwest of the project work area and 700 feet north of staging area 2. Additionally, recreational camping opportunities exist in the formally designated camping area approximately 1,000 feet south of the project work area.

There is substantial terrain that blocks the line-of-sight of the receptors to the construction equipment. To account for this line-of-sight occlusion, a -5 dB adjustment was applied to prediction results. Applying an acoustical propagation attenuation of 7.5 dB per doubling of distance over soft ground, maximum project-

[50] Interior noise at building-receptors will be estimated based on a -25 dB adjustment to exterior noise modeling results to estimate the exterior-interior noise reduction.

[51] Based on reference sound pressure level values and usage factors in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual (2018).

related construction noise levels at receptors are estimated to be approximately 49 dBA L_{eq} at 700 feet, 46 dBA L_{eq} at 900 feet, and 45 dBA L_{eq} at 1,000 feet, depending on the specific equipment in use and proximity to work areas.[52] These construction noise levels would exceed the ambient noise levels of 30 to 35 dBA by 10 to 14 dBA; however, these increases above ambient noise levels would be intermittent and temporary during construction.

If the double-shift construction were to occur and extend into the evening hours (e.g., 5:00 p.m. to 10:00 p.m.), it would generally involve the same types of equipment and construction activities used during daytime. Consequently, estimated noise levels at the nearest sensitive receptors would be similar to those described for daytime conditions. Although noise levels would remain consistent, the potential for disturbance may increase during evening hours due to reduced ambient noise and heightened sensitivity to noise during periods of rest. The project would implement SFPUC Standard Construction Measure #5 (Noise), which requires that all SFPUC projects undertake measures to minimize noise disruption to sensitive receptors during construction. These efforts could include using best available equipment with noise-reducing features, including mufflers and enclosures, which would serve to minimize construction noise levels, and providing advance notice regarding the timing and duration of construction activities. As noted above, there is only one permanent sensitive receptor, the watershed keeper's residence, in the project vicinity; the other receptor locations are transient use (camping areas and the bunkhouse), and campers could choose to use other dispersed camping areas further away from the project site where construction noise would not be experienced. Therefore, although temporary evening noise may be perceptible, the project would not result in a significant noise impact.

The project does not include any permanent operational noise sources. Once construction is complete, noise conditions are expected to return to existing ambient levels.

Therefore, given that noise from construction activities would be temporary and that SFPUC would implement Standard Construction Measure #5 to minimize noise disruption to sensitive receptors during construction, noise impacts would be *less than significant*.

Impact NO-2: The project would not generate excessive groundborne vibration or groundborne noise levels. (No Impact)

Construction activities have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The heaviest vibration-generating construction equipment onsite would be the dozer, which is conservatively assumed to generate vibrations similar to a bulldozer. According to the Federal Transit Administration, the vibration level for a bulldozer is 0.089 inch per second PPV and 87 VdB at a reference distance of 25 feet.[53] Using the Federal Transit Administration's recommended procedure for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels would not be perceptible at the closest existing structures, located at 1,000 feet from the project work area, and would not exceed Caltrans's recommended standard of 0.2 inches per second PPV[54] with respect to the prevention of

[52] Sound from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, and the sound level attenuates (decreases) at a rate of 6 dB for each doubling of distance from a point/stationary source.
[53] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.
[54] California Department of Transportation, Transportation and Construction Vibration Guidance Manual, September 2020.

structural damage for normal buildings, or the Federal Transit Administration's maximum-acceptable vibration standard of 80 VdB[55] with respect to human annoyance for residential uses.

Following construction, project operations would be similar to existing operations, which are not a source of vibration.

For these reasons, the project would have *no impact* related to groundborne vibration and groundborne noise impacts.

Impact C-NO: The project, in combination with reasonably foreseeable future projects, would not result in a significant cumulative noise or vibration impact. (Less than Significant)

The geographic area for the analysis of cumulative noise impacts includes the project site and surrounding areas that may experience noise from concurrent construction projects. The following projects, identified in the cumulative project list (see Table 6), could overlap and contribute to temporary increases in noise levels during construction: Cherry Oil (Lake) Road Repair and Paving Operation and Maintenance Activities, Public Resources Code Section 4292 Pole Equipment Replacement Project, and Eleanor Bridge Interim Repair Project. These projects, occurring within the same region as the proposed project, may lead to temporary, localized increases in noise levels. However, they would not result in a permanent increase in noise levels, as they are primarily maintenance or infrastructure upgrade projects. Since these projects are SFPUC-managed, they would also be required to comply with SFPUC Standard Construction Measure #5 (Noise), which includes noise control measures such as using noise-reducing equipment. Given implementation of Standard Construction Measure #5 and the temporary nature of noise from construction activities, the project in combination with cumulative projects would not result in significant cumulative noise impacts. This impact would be *less than significant*.

As indicated under Impact NO-2, the project's impacts related to vibration would be negligible and therefore would not contribute to cumulative vibration impacts.

[55] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.

E.8 Air Quality

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
AIR QUALITY. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☐
b) 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?	☐	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐	☐

OVERVIEW

Tuolumne County is within the Mountain Counties Air Basin (air basin). The Tuolumne County Air Pollution Control District (or air district) is responsible for attaining and maintaining air quality in Tuolumne County within federal and state air quality standards, as established by the federal Clean Air Act and the California Clean Air Act, respectively. Specifically, the air district has the responsibility to monitor ambient air pollutant levels throughout the air basin and to develop and implement strategies to attain the applicable federal and state standards. The federal and state clean air acts require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, which consists of the air district's rules and regulations to meet emissions requirements, was adopted by the air district in 2021.[56]

CRITERIA AIR POLLUTANTS

In accordance with the state and federal Clean Air Acts, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These air pollutants are termed criteria air pollutants because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Tuolumne County is designated as either in attainment or unclassified for most criteria pollutants with the exception of ozone, which designated as non-attainment (marginal) for the state or

[56] Tuolumne County Air Pollution Control District, Rules and Regulations, July 2021.

federal standards.[57] 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_X).

By its very nature, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. 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.

Emissions of ozone precursors (i.e., ROG and NO_X) are primarily a result of the combustion of fuel from on-road vehicles (e.g., haul trucks or worker commutes) and off-road equipment (e.g., bulldozers, excavators, etc.). The air district has established emissions thresholds for certain air pollutants for the purposes of CEQA. Thresholds of significance applicable to the project's construction and operations are 1,000 pounds per day or 100 tons per year of ozone precursors (ROG and NO_X), CO, and PM_{10}.[58] Projects that would result in criteria air pollutant emissions below these significance thresholds would not result in a cumulatively considerable net increase in criteria air pollutants in the air basin.

FUGITIVE DUST

Additionally, fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices at construction sites significantly control fugitive dust and individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.[59]

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 can cause chronic (i.e., of long duration) and acute (i.e., severe but short-term) adverse effects to human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and mortality. There are hundreds of different types of TACs with varying degrees of toxicity; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Exposures to fine particulate matter ($PM_{2.5}$)[60] are strongly associated with mortality, respiratory diseases, and decreased lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.[61] In addition to $PM_{2.5}$, diesel particulate matter (DPM) is also of concern. The California Air Resources Board identified diesel particulate matter as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans.[62]

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57 "Attainment" status refers to those regions that are meeting federal and/or state standards for a specified criteria pollutant. "Non-attainment" refers to regions that do not meet 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.

58 PM_{10} is often termed "coarse" particulate matter and is made of particulates that are 10 microns in diameter or smaller.

59 Western Regional Air Partnership. 2006. WRAP Fugitive Dust Handbook, September 7, 2006. This document is available online at *http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf*.

60 $PM_{2.5}$, termed "fine" particulate matter, is composed of particles that are 2.5 microns or less in diameter.

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

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

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 that 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, 7 days a week, for 30 years.[63] Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Impact AQ-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant)

The project would be required to adhere to all of the air district's rules for all activities that occur within the air district's jurisdiction, including but not limited to the following Tuolumne County Air Pollution Control District Rules: Rule 202 – Visible Emissions, Rule 205 – Nuisance, Rule 207 – Particulate Matter, and Rule 211 – Process Weight Per Hour/Atmospheric Discharge.

Tuolumne County has included policies and implementation measures in its General Plan to reduce emissions and improve air quality. Tuolumne County General Plan Implementation Program 15.A.k identifies the following dust control measures[64] for implementation during all project-related site preparation activities (i.e., grading, excavation and associated materials hauling) to reduce air quality impacts:

- Exposed soils shall be watered as needed to control wind borne dust.
- Exposed piles of dirt, sand, gravel, or other construction debris shall be enclosed, covered and/or watered as needed to control wind borne dust.
- Vehicle trackout shall be minimized through the use of rumble strips and wheel washers for all trucks and equipment leaving the site.
- Sweep streets once a day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water).
- Onsite vehicle speed shall be limited to 15 miles per hour on unpaved surfaces.
- Loads on all haul/dump trucks shall be covered securely or at least 2 feet of freeboard shall be maintained on trucks hauling loads.
- Construction equipment shall be maintained and tuned at the interval recommended by the manufacturers to minimize exhaust emissions.

[63] California Office of Environmental Health Hazard Assessment, Air Toxics Hot Spot Program Risk Assessment Guidelines, February 2015. Pg. 4-44, 8-6.

[64] Implementation Program 15.A.k states that alternative air quality measures may be adopted by the decision-making body after considering a project-specific air quality analysis performed by a qualified consultant.

- Equipment idling shall be kept to a minimum when equipment is not in use.
- Construction equipment shall be in compliance with the California Air Resources Board off-road and portable equipment diesel particulate matter regulations.

The SFPUC has developed standard construction measures to be included in all construction contracts. Standard Construction Measure #2 (Air Quality) requires projects to comply with applicable local and state dust control regulations. Therefore, SFPUC and its contractor(s) would adhere to the above dust-control measures as applicable to the project.

Following construction, regular inspection and routine maintenance of Cherry Valley Dam and Spillway would continue similar to existing conditions and there would be no new operational sources of emissions.

For the above-discussed reasons, the project would not conflict with or obstruct implementation of the air district air quality plan, and this impact would be *less than significant.*

Impact AQ-2: The project would generate fugitive dust and criteria air pollutants but would not result in a cumulatively considerable net increase of any criteria air pollutant for which the region is non-attainment under an applicable federal, state, or regional ambient air quality standard. (Less than Significant)

CONSTRUCTION

Construction activities (short-term) 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. However, ROGs are also emitted from activities that involve painting, other types of architectural coatings, or asphalt paving. The proposed project's construction activities involve the following phases: site preparation and mobilization, excavation of landslide debris and material processing, embankment construction, erosion protection, and site restoration. During the project's approximately 4- to 6-month construction period, construction activities would have the potential to result in emissions of ozone precursors and particulate matter, as discussed below.

Fugitive Dust

Project-related demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and due to specific contaminants, such as lead or asbestos that may be constituents of soil. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. As stated under Impact AQ-1, SFPUC and its contractor(s) would adhere to the County's General Plan Implementation Program 15.A.k for construction activities, as stipulated in the SFPUC's Standard Construction Measure #2 (Air Quality), which requires that all projects outside the City of San Francisco comply with applicable local and state dust control regulations. With implementation of these dust reduction measures, the project impact on air quality related to fugitive dust would be *less than significant*.

Criteria Air Pollutants

As discussed above, construction activities would result in emissions of criteria air pollutants from the use of off- and on-road vehicles and equipment and other construction activities.

As described above, the air district CEQA thresholds of significance are 1,000 pounds per day or 100 tons per year for ROG, NO_X, CO, and PM_{10}. Due to the low quantity of construction equipment; small construction workforce (6 to 10 workers per day), off-site truck trips (1 to 18 round trips per day), and on-site truck trips[65] (1 to 28 round trips per day over approximately 0.3 mile) required; and limited overall construction duration (4 to 6 months), construction-related emissions would not approach the air district thresholds. However, to demonstrate the anticipated level of daily construction emissions, a representative emissions modeling scenario was evaluated to estimate potential maximum daily and annual construction-related emissions. As the double-shift scenario would result in higher daily construction activity levels (i.e., 16 hours per day versus 8 hours per day under the single-shift scenario), the phases that would have double shifts were considered in determining a phase that would represent the potential maximum daily construction phase. Based on Table 4, Summary of Construction Activities, Equipment, Crew, and Duration, in Section A, Project Description, the "Excavation of Landslide Debris and Material Processing" phase was determined to represent the potential maximum daily construction phase because it has the highest number of equipment of the potential double-shifted phases. The California Emissions Estimator Model was used to estimate construction emissions for this representative maximum daily scenario, which are shown in **Table 7** below.

Table 7 Estimated Maximum Daily Construction Emissions

	ROG	NO_X	CO	PM_{10} [a]	$PM_{2.5}$ [a]
	Pounds per Day				
Representative Maximum Daily Construction Emissions [b]	16.7	114.2	133.0	56.6	14.4
Air District Thresholds of Significance	1,000	1,000	1,000	1,000	--
Exceeds Threshold?	No	No	No	No	N/A

Source: Modeled by AECOM in 2025. See Appendix B.
ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter with diameter less than 10 microns; $PM_{2.5}$ = particulate matter with diameter less than 2.5 microns; N/A = not applicable; -- = no air district threshold of significance
[a] PM_{10} and $PM_{2.5}$ fugitive dust emissions are unmitigated and do not account for watering that would occur, which would result in reduced emissions of PM_{10} and $PM_{2.5}$.
[b] The Excavation of Landslide Debris and Material Processing phase includes operation of a riprap processing plant, which is not a standard default equipment type available in the California Emissions Estimator Model, and fugitive dust emissions resulting from material processing are not included in the representative maximum daily construction emissions. However, fugitive dust emissions from material processing would not occur at a level that would cause exceedance of the threshold.

As shown in Table 7, estimated maximum daily construction emissions for the double-shift phase with the anticipated highest construction equipment activity level would be well below the air district thresholds. Additionally, even if these maximum daily emissions were to occur throughout the duration of construction, which would not be the case, total construction emission for the highest-emitted pollutant (CO) would be approximately 5 tons per year and less for all other pollutants. Annual emissions would be well below the air district's 100-ton annual threshold.

Therefore, because project construction would not generate emissions above the air district thresholds, construction-related emissions would not result in a cumulatively considerable net increase in criteria air

[65] Onsite truck trips include trips to transport material between staging area 2 and the project work area (approximately 0.15 mile one-way from the center of staging area 2 to the center of the project work area).

pollutants for which the region is non-attainment under an applicable federal, state, or regional ambient air quality standard, and this construction impact on air quality would be *less than significant*.

OPERATION

Project implementation would not include changes to existing operations and maintenance, nor would it include new or additional staff. Regular inspection and routine maintenance of the spillway would continue similar to existing conditions. Routine inspections and maintenance activities would not require the extensive use of off-road equipment or additional vehicle trips such that emissions from operation and maintenance activities would increase beyond existing conditions. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria air pollutant for which the region is in non-attainment under an applicable federal, state, or regional ambient air quality standard, and there would be *no impact* related to operational activities.

Impact AQ-3: The project would generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

There is only one permanent residence in the project site vicinity – the SFPUC watershed keeper's residence. This residence is approximately 1,000 feet northwest of the project work area and 850 feet north of staging area 2. Additionally, transient United States Forest Service employees are present at the Cherry Compound bunkhouse for a portion of the year. The bunkhouse is approximately 900 feet northwest of the project work area and 700 feet north of staging area 2. Recreational camping opportunities would remain open in the formally designated camping area, approximately 1,000 feet south of the project work area. Additionally, while direct vehicular access to dispersed camping areas within the Raker Act boundary would be temporarily restricted during construction of the project, dispersed camping in this area could be accessed by foot.

If the Cherry Lake boat launch area is used to supply water for project construction, a small pump powered by a small portable gas-powered generator would be installed temporarily to fill water trucks. Water trucks would transport water approximately 1,560 feet from the boat launch area to the project work area. If the Cherry Compound hydrants are used to supply water for project construction, a pump would not be required. Water trucks would transport water approximately 1,900 feet from the hydrants to the project work area.

Potential impacts related to exposure of sensitive receptors to substantial pollutant concentrations are evaluated qualitatively due to the short-term and temporary nature of construction activities, in addition to the limited sensitive receptors in the area and distance between the project site and any sensitive receptors.

CONSTRUCTION

On-road heavy-duty diesel vehicles and off-road equipment would be used during the 4 to 6-month construction duration; however, emissions would be temporary and variable in nature and therefore not expose sensitive receptors to substantial air pollutants. Furthermore, the project would be required to comply with California regulations limiting idling to no more than 5 minutes,[66] which would further reduce nearby sensitive receptor exposure to temporary and variable diesel particulate matter emissions. As shown

[66] California Code of Regulations, Title 13, Division 3, § 2485 (on-road) and § 2449(d)(2) (off-road).

in Table 7, construction-related $PM_{2.5}$, which includes diesel particulate matter emissions, would be approximately 14.4 pounds per day for the double-shift phase with the highest construction equipment activity level, which is presumed to represent the maximum daily construction phase. According to Office of Environmental Health Hazard Assessment methodology, health effects from carcinogenic toxic air contaminants are usually described in terms of individual cancer risk, which is based on a 30-year lifetime exposure, beginning in the last trimester of pregnancy and progresses through the exposure duration.[67] Of the two construction scenarios, the single-shift scenario would result in the longer construction duration at approximately 6 months. Therefore, the total exposure period for project construction (6 months) would be less than 2 percent of the total exposure period used for typical health risk calculations (i.e., 30 years).

The Office of Environmental Health Hazard Assessment methodology contains guidelines to define the geographic area affected by a project's emissions.[67] Additionally, studies by Zhu et al. (2002)[68] have found that concentrations of particulate matter disperse rapidly and tend to be reduced substantially at a distance of 1,000 feet from emission sources (e.g., freeways or large distribution centers). Excluding the SFPUC watershed keeper's residence at a distance of 850 feet as noted above, the closest permanent sensitive receptors are more than 9 miles (approximately 49,000 feet) southwest of the project construction areas. Tuolumne County General Plan Implementation Program 15.A.j states that projects proposing sources of diesel particulate matter within 500 feet of a sensitive receptor require completion of a health risk assessment to determine potential health risk impacts. Project construction areas would be well beyond the recommended health screening distance of 500 feet from sensitive receptors as provided in the Implementation Program 15.A.j of the Tuolumne County General Plan. Additionally, individuals present in the Cherry Compound bunkhouse, (located approximately 1,000 feet northwest of the project work area), formal camping area (located approximately 1,000 feet south of the project work area), boat launch area (approximately 1400 feet north of the project work area), or dispersed camping areas within the project vicinity would not be exposed to substantial pollutant concentrations due to their intermittent and temporary nature. If construction water supply is obtained from the boat launch, a pump would be required and powered by a small, portable gas-powered generator, but this equipment would only operate intermittently. Water truck trips between the hydrants or boat launch area and the project work area would also be intermittent and temporary during the period of earthwork activities (i.e., one truck trip per hour). Therefore, public use of the boat launch area or truck trips associated with transporting water for use during project construction would not result in exposure of sensitive receptors to substantial pollutant concentrations. Sensitive receptors, such as residences, are located along major roadways used for delivery and haul truck trips; however, sensitive receptors located along these routes would not be exposed to substantial pollutant concentrations. Delivery and haul truck trips would be infrequent and temporary, vary in the number of truck trips per day, occur only over the approximately 4- to 6-month project duration, and cease upon completion of construction activities. Additionally, as described above, concentrations of particulate matter disperse rapidly and are reduced with increased distance from the emission source.

Given the limited duration of construction activities, infrequent delivery and haul truck trips, the highly dispersive nature of diesel particulate emissions and distance from sensitive receptors, construction of the project would not expose sensitive receptors to substantial toxic air contaminant concentrations that could

[67] Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments, 2015, *https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0*.

[68] Zhu, Y., et al. Study of Ultra-Fine Particles Near A Major Highway With Heavy-Duty Diesel Traffic, Atmospheric Environment, 2002, 36:4323-4335.

cause short- or long-term health effects, and this construction impact on air quality would therefore be *less than significant*.

OPERATION

As described previously, following construction, project operations would remain similar to existing conditions. Routine inspections and maintenance activities would not require the extensive use of off-road equipment such that emissions from operation and maintenance activities would increase beyond existing conditions. Therefore, project operations would not expose sensitive receptors to substantial pollutant concentrations and there would be *no impact*.

Impact AQ-4: The project would not result in other emissions (such as those leading to odors) adversely affecting 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 construction, diesel exhaust from construction equipment would generate some odors. However, construction-related odors would be temporary and would not persist upon project completion. Operation of the Cherry Valley Dam and spillway would remain similar to existing conditions, and no new permanent operational odor sources would be introduced. Therefore, the project would not result in other emissions, such as odors, that could adversely affect a substantial number of people and this impact would be *less than significant*.

CUMULATIVE AIR QUALITY IMPACTS

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. The project-level criteria air pollutants are below threshold levels, and as such project-level pollutant sources are not anticipated to result in a considerable net increase in non-attainment criteria air pollutants. Therefore, cumulative criteria air pollutant analysis is presented in Impacts AQ-2, and the remainder of this cumulative air quality analysis addresses cumulative health risks and odors to sensitive receptors.

Impact C-AQ: The project, in combination with cumulative projects, would result in less than significant cumulative air quality impacts. (Less than Significant)

Construction activities associated with the project would have a cumulatively considerable impact on sensitive receptors if the aggregate total of risks and hazards from existing and planned sources within 1,000 feet of the project sources plus the risks and hazards from the project's sources exceed the recommended thresholds of significance identified for cumulative impacts. Tuolumne County has not adopted thresholds of significance or specific guidance related to assessing cumulative project impacts.

One of the cumulative projects listed in Table 6 (Cherry Oil [Lake] Road Repair and Paving Operation and Maintenance Activities) would include construction activities within 1,000 feet of the project site and could overlap with the project's construction schedule. Additionally, the Eleanor Bridge Interim Repair Project

would use the same access roads as the project and could overlap with the project's construction schedule; the Eleanor Bridge Project may also use some of the same staging areas as the proposed project, but only for material and equipment storage, construction vehicle parking, and shared use of construction trailers. Given the distance from the project construction areas and cumulative projects within 1,000 feet to sensitive receptors, the small number of infrequent truck trips associated with the project (1 to 18 off-site round trips per day, and 1 to 28 on-site [approximately 0.3 mile] round trips per day) required, and the highly dispersive nature of diesel particulate matter emissions, the project's incremental increase in localized toxic air contaminant emissions resulting from construction would be minor and would not contribute considerably to cumulative toxic air contaminant emissions when combined with that from cumulative projects.

Similarly, the proposed project and cumulative projects would generate some odors during construction, but odors would be temporary. Upon completion of construction activities cumulative projects combined with the proposed project would not generate substantial odors. Therefore, the project in combination with cumulative projects would not result in significant cumulative impacts related to odors or toxic air contaminants. These impacts would be *less than significant*.

E.9 Greenhouse Gas Emissions

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐
b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

GHG emissions and global climate change are cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combined GHG emissions from past, present, and future projects have contributed to and continue to contribute to global GHG emissions and the associated environmental impacts from climate change. For this reason, the analysis of the project's impact on climate change focuses on the project's contribution to cumulatively significant GHG emissions. Given that the analysis is in a cumulative context, this section does not include an individual, project-specific impact statement.

The project site is located in Tuolumne County, primarily on property under SFPUC jurisdiction and within the City and County of San Francisco's Raker Act right-of-way. The SFPUC is an agency of the City and County of San Francisco and is therefore under the jurisdiction of the City's charter and plans, where applicable. The context in which GHG emissions are analyzed is based on how the emissions are accounted for and how they can be affected by emissions reduction measures and strategies. The San Francisco Department of the Environment maintains annual community-wide and municipal GHG emissions inventories, in which GHG emissions from off-road equipment and SFPUC fleet vehicles are included. Therefore, while the project would generate GHG emissions within Tuolumne County, the project GHG emissions are accounted for in the City and County of San Francisco's GHG inventory and associated emission reduction strategies. The project's impact with respect to GHG emissions is analyzed below based on Tuolumne County and relevant City and County of San Francisco guidelines and regulations.

The Tuolumne County Climate Action Plan, adopted in November 2022,[69] identifies existing and projected GHG emissions, sets GHG reduction targets, establishes policies and actions to meet reduction targets, integrates climate adaptation and resilience strategies, engages the community, and provides an implementation program. Because the project GHG emission sources are not within the regulatory jurisdiction of Tuolumne County, they have not been accounted for in the Tuolumne County GHG emissions inventory. However, project consistency with applicable Tuolumne County Climate Action Plan measures would support achievement of GHG emissions reductions and climate resiliency.

San Francisco's 2023 GHG Reduction Strategy Update[70] presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's GHG reduction strategy in compliance with

[69] Tuolumne County, Climate Action Plan, 2022, *https://www.tuolumnecounty.ca.gov/DocumentCenter/View/23701/Final-Clean-linked*, accessed July 2024.

[70] San Francisco Planning Department, 2023 Greenhouse Gas Reduction Strategy Update, October 2023, *https://sfplanning.org/project/greenhouse-gas-reduction-strategies*, accessed November 1, 2024.

CEQA Guidelines. The GHG reduction actions have resulted in a 48 percent reduction in GHG emissions in 2020 compared to 1990 levels,[71] which far exceeds the goal set in executive order S-03-05[72] and the California Global Warming Solutions Act of 2006 (Assembly Bill 32[73]) to reduce GHG emissions to 1990 levels by 2020. The city has also met and exceeded the 2030 target to reduce GHG emissions to 40 percent below 1990 levels, as set in executive order B-30-15 and Senate Bill 32, which amended the California Global Warming Solutions Act of 2006.

San Francisco's GHG reduction goals, updated in July 2021 by ordinance 117-02, are consistent with, or more aggressive than, the long-term goals established under executive orders S-3-05, B-30-15, and B-55-18, and Senate Bill 32. The updated GHG ordinance demonstrates the city's commitment to continued GHG reductions by establishing targets for 2030, 2040, and 2050 and setting other critical sustainability goals. In particular, the updated ordinance sets a goal to reach net-zero sector-based GHG emissions by 2040 and sequester any residual emissions using nature-based solutions. Thus, the city's GHG reduction goal is consistent with the state's long-term goal of reaching carbon neutrality by 2045, as set forth in Assembly Bill 1279. The updated GHG ordinance required the San Francisco Department of the Environment to prepare and submit to the mayor a climate action plan by December 31, 2021. The climate action plan, which was released on December 8, 2021, and will be updated every 5 years, carries forward the efforts of the city's previous climate action plans and charts a path toward meeting the GHG commitments of the Paris agreement (e.g., limit global warming to 1.5 degrees Celsius) as well as the reduction targets adopted in the GHG ordinance.

In summary, the CEQA Guidelines allow projects consistent with an adopted GHG reduction strategy to be found to have a less-than-significant GHG impact. San Francisco has a GHG reduction strategy that is consistent with near- and long-term state and regional GHG reduction goals and is effective because the city has demonstrated its ability to meet state and regional GHG goals in advance of target dates. Therefore, projects that are within the scope of and comply with the applicable mandatory measures would be consistent with San Francisco's GHG reduction strategy, would not result in GHG emissions that would have a significant effect on the environment, and would not conflict with state, regional or local GHG reduction plans and regulations.

Impact C-GG: The 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)

Project construction would generate temporary GHG emissions from use of construction equipment and vehicles for construction worker travel, vendor and haul truck trips, and on-site truck travel. Construction-related GHG emissions represent a very small portion of a project's lifetime GHG emissions.[74] Implementation of the project would not change existing operations and maintenance, nor would it include

[71] San Francisco Department of the Environment, San Francisco's 2019 Carbon Footprint, *https://sfenvironment.org/carbonfootprint*, accessed February 7, 2025.
[72] Office of the Governor, Executive Order S-3-05, June 1, 2005, *https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/5129-5130.pdf*, accessed November 1, 2024.
[73] California Legislative Information, Assembly Bill 32, September 27, 2006, *http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf*, accessed November 1, 2024.
[74] Bay Area Air Quality Management District, 2022 CEQA Guidelines, Appendix B: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans, April, *https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-b-thresholds-for-evaluating-significance-of-climate-impacts_final-pdf.pdf?rev=10305f45037b41dba2cd1b45b288d54b&sc_lang=en*, accessed January 29, 2025.

new or additional staff following construction. Therefore, emissions associated with operations and maintenance would be similar to existing conditions.

CONSISTENCY WITH TUOLUMNE COUNTY CLIMATE ACTION PLAN

Measures 2.1 and 2.3 of the Tuolumne County Climate Action Plan call for reduced vehicle idling and air pollution from off-road vehicles and equipment. In accordance with SFPUC Standard Construction Measure #2 (Air Quality), equipment idling shall be kept to a minimum, and construction equipment shall be in compliance with the California Air Resources Board off-road and portable equipment diesel particulate matter regulations and maintained and tuned at the interval recommended by the manufacturer. Therefore, project construction would be consistent with Tuolumne County Climate Action Plan measures designed to reduce GHG emissions from off-road vehicles and equipment and the project would not conflict with the Tuolumne County Climate Action Plan.

CONSISTENCY WITH SAN FRANCISCO GHG REDUCTION STRATEGY

The project would be subject to regulations adopted to reduce GHG emissions as identified in the San Francisco GHG reduction strategy and demonstrated in the GHG checklist completed for the project.[75] Most of the measures in the San Francisco GHG Compliance Checklist are not relevant to the project, because the project would not result in long-term emissions from operational activities. However, the project would meet the applicable construction requirements of the San Francisco Environment Code regarding Responsible Production and Consumption, Resource Conservation, Water Conservation, and Human and Environmental Health. Additionally, excavated materials would be reused or stockpiled onsite for future SFPUC projects, thereby reducing GHG emissions associated with material hauling and disposal. As discussed above, these regulations have proved effective as San Francisco has reduced its GHG emissions by 48 percent below 1990 levels, far exceeding statewide and regional 2020 GHG reduction targets. Furthermore, the city's GHG emission reductions in 2019 also met statewide and regional 2030 targets more than 10 years in advance of the target year. Therefore, because the project would be subject to regulations adopted to reduce GHG emissions, the project would be consistent with City and County of San Francisco's GHG reduction strategy and would not contribute significantly to cumulative GHG emissions or conflict with state, regional, and local GHG reduction plans and regulations.

CONCLUSION

Because the project would be consistent with the applicable measures in the Tuolumne County Climate Action Plan as well as the City and County of San Francisco's GHG reduction strategy, it would also be consistent with the GHG reduction goals of executive orders S-3-05, B-30-15, and B-55-18 as codified by Assembly Bill 32, Senate Bill 32, and Assembly Bill 1279, respectively, and the California Global Warming Solutions Act of 2006 as amended by Senate Bill 32, and would not contribute significantly to cumulative GHG emissions or conflict with state, regional, and local GHG reduction plans and regulations. As such, the project impact would be *less than significant* with respect to GHG emissions.

[75] San Francisco Planning Department, Greenhouse Gas Analysis: Compliance Checklist for 2024.000353ENV, February 2025.

E.10 Wind

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
WIND. Would the project:					
a) Create wind hazards in publicly accessible areas of substantial pedestrian use?	☐	☐	☐	☒	☐

Impact WI-1: The project would not create wind hazards in publicly accessible areas of substantial pedestrian use. (No Impact)

This analysis considers whether the project would create new wind hazards in publicly accessible areas of substantial pedestrian use through the development of built structures in the project area. Based upon the experience of the San Francisco Planning Department in reviewing wind analyses and expert opinion on other projects, it is generally the case that built structures under 80 feet in height do not have the potential to generate significant wind hazard impacts. Project-related wind hazard impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented such that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation.

The proposed embankment for the discharge channel is a trapezoidal cross-section design, 20 feet wide at the crest and 10 feet high with respect to the elevation of the east channel bed at the downstream toe of the embankment.[76] The embankment would not be of a scale, mass, or height that would change wind patterns or speeds. Therefore, the project would not permanently alter wind in a way that would create wind hazards.

For these reasons, the project would have *no impact* related to wind hazard in pedestrian areas.

Impact C-WI: The project, in combination with cumulative projects, would not result in a significant cumulative wind impact. (No Impact)

Because the project would have no wind impacts, it would not contribute to any potential cumulative wind impact; therefore, there would be *no impact*.

[76] GEI Consultants. Draft 65% Design Report, February 2025.

E.11 Shadow

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
SHADOW. Would the project:					
a) Create new shadow that substantially and adversely affects the use and enjoyment of publicly accessible open spaces?	☐	☐	☐	☒	☐

Impact SH-1: The project would not create a new shadow that substantially and adversely affects the use and enjoyment of publicly accessible open spaces. (No Impact)

The proposed embankment would be 10 feet high in order to restore the alignment of the discharge channel to its original course. Staging areas 1a and 1b are currently used for public dispersed camping. However, these areas are at a lower elevation than that of the proposed embankment area. Due to the terrain, tree cover within the forest, and comparatively low embankment height, the project would not create new shadow in a manner that affects the use and enjoyment of publicly accessible open spaces.

For these reasons, the project would have *no impact* on shadow conditions.

Impact C-SH: The project, in combination with cumulative projects, would not result in a significant cumulative shadow impact. (No Impact)

Because the project would have no shadow impacts, it would not contribute to any potential cumulative shadow impact; therefore, there would be *no impact*.

E.12 Recreation

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
RECREATION. Would the project:					
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?	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☐	☒

The project does not include recreational facilities and would not require the construction of new or expansion of existing recreational facilities, since it would not induce substantial unplanned population growth that would in turn generate new recreational demand. Therefore, significance criterion (b) is *not applicable*, and is not discussed further in this section.

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 site is surrounded by Stanislaus National Forest lands and there are recreational amenities associated with the forest and Cherry Lake in the vicinity of the project site. Recreational activities in the area include camping, hiking, boating, fishing, and swimming. The project would not increase population or housing in the area that would result in increased use of recreational facilities in the vicinity of the project site.

There are no designated trails in the immediate vicinity of the project site. Public dispersed camping is allowed throughout the area, including the project site, and construction staging areas 1a, 1b, and 2 have been used for public dispersed camping in the past. In addition, there is a designated dispersed campground adjacent to Cherry Creek located approximately 1,000 feet southwest of the project work area. Access to these dispersed camping areas is provided by Lower Haul Road (unpaved) and Cherry Oil Road (paved). For public safety reasons, dispersed camping would not be permitted within the project site (i.e., within the project work area, road improvement areas, and staging areas) during construction. Additionally, Lower Haul Road would be closed to public vehicular access during construction, and there is a pipe gate on Cherry Oil Road adjacent to the discharge channel that would be closed and locked during project-related construction activities. While access roads and the pipe gate would be closed to public vehicular access during construction, dispersed camping in the vicinity of the project site would remain accessible by foot. Additionally, the designated campground adjacent to Cherry Creek would continue to be accessible to recreationists from Cherry Oil Road (i.e., the turnoff from Cherry Oil Road to this camping area is accessed just before the gate). The loss of availability of dispersed camping in the project site vicinity would only encompass an approximately 90-acre portion of the 898,000-acre Stanislaus National Forest. Sufficient

additional dispersed camping areas exist in immediate proximity to the project site, including the camping area adjacent to Cherry Creek and throughout Stanislaus National Forest in the project site vicinity. Therefore, the temporary loss of the project site for dispersed camping during project construction would not be expected to substantially deter recreationists from the Cherry Lake such as to substantially increase the use of camping areas in other nearby parks and recreational areas.

The Cherry Valley Campground, and the Cherry Lake Boat Launch and associated parking area, which are operated by the United States Forest Service, are approximately 0.85 mile and 0.3 mile north of the project site, respectively, on the west shore of Cherry Lake. Both of these recreational facilities are accessed by Cherry Lake Road, a paved road approximately 1,000 feet uphill from the project work area, staging areas, and road improvement areas. No road closures on Cherry Lake Road would be necessary. Water required for project construction may be supplied from Cherry Lake. If water is obtained from Cherry Lake, a water pump would be installed near the existing boat launch in a manner that would not interfere with recreational use of the Cherry Lake Boat Launch. Therefore, project-related construction traffic and use of the lake for construction water supply would not interfere with the ability of recreationists to access facilities within Stanislaus National Forest such that use of facilities in other nearby parks and recreational areas would substantially increase.

At the completion of construction, public access to Lower Haul Road would be restored, and the gate on Cherry Oil Road at the discharge channel would be reopened to the public. Dispersed camping throughout the project site, including staging areas 1a, 1b, and 2, would be fully available to the public similar to existing conditions. Furthermore, the proposed road improvements would provide a benefit by improving vehicular safety for recreationists traveling on these roads.

For the reasons above, project construction would not increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, and this impact would be *less than significant.*

Impact C-RE: The project, in combination with cumulative projects, would not result in a significant cumulative recreation impact. (Less than Significant)

The geographic scope for cumulative recreation impacts includes the project site, immediate vicinity, and other nearby recreational facilities within Stanislaus National Forest. Construction of the project and cumulative projects could result in a significant cumulative impact if combined construction activities in the project area resulted in increased use of other nearby recreational facilities, resulting in substantial or accelerated deterioration of the facilities. Although the project construction timeline may overlap with several of the projects identified in the cumulative project list in Table 6, these projects are not anticipated to result in substantive impacts to recreational resources, meaningfully inhibit access to recreational resources, or induce population growth, causing indirect impacts or changes to use of recreational lands or facilities that would result in substantial or accelerated deterioration. The Cherry Compound Power System Upgrades Project would include replacing electrical facilities in the area; this project would not affect the dispersed camping opportunities near the project site because there are no electrical power facilities in the dispersed camping areas. The Cherry Dam Leakage Weirs Replacement Project would occur on dam infrastructure and have no effect on nearby recreational facilities. Cherry Oil (Lake) Road Repair and Paving Operation and Maintenance Activities, which includes repaving, could result in short-term delays for recreational motorists, and could overlap with construction of the proposed project. Similarly, the Eleanor Bridge Interim Repair Project is anticipated to have a construction schedule that overlaps with the proposed

project and may use the same access roads as the proposed project, including Cherry Lake Road. While use of access roads by multiple projects during the construction period could result in short-term delays for recreational motorists, the ability of recreationists to access facilities would not be meaningfully impaired and would not be expected to increase use of existing parks or other recreational facilities such that substantial physical deterioration of the facilities would occur. Even if recreationists were to opt for other camping locations, they would have an abundance of adjacent areas to camp in the vicinity, such that no area would see a substantial increase resulting in deterioration of recreational facilities. Therefore, the project in combination with the identified cumulative projects would not result in significant cumulative impacts related to recreation. This impact would be *less than significant*.

E.13 Utilities and Service Systems

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
UTILITIES AND SERVICE SYSTEMS. Would the project:					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐	☐

Impact UT-1: The project would not result in the relocation or construction of new or expanded water, wastewater treatment, storm drainage, or other utility facilities that would cause significant environmental effects. (No Impact)

Project construction would require water usage for concrete/grout mixing, washing operations required for the temporary and portable concrete mixing plant, rinsing of riprap rocks prior to grouting, dust suppression, construction workers' drinking, and on-site sanitary needs. Water required for construction would be supplied from Cherry Lake, the valve house, or existing hydrants located within Cherry Compound,[77] using water trucks. Use of water from Cherry Lake would require installation of a temporary water pump located near the existing boat launch. Cherry Compound and hydrant locations are delineated in Figure 2 in Section A, Project Description. Use of water from the valve house would require installation of a temporary water pump, located slightly closer to the project work area, and may require a new water

[77] Cherry Compound refers collectively to auxiliary facilities, including a corporation yard with office and garage, staging area used by the United States Forest Service fire department, watershed keeper's cottage, SFPUC fuel yard, staging area used by the SFPUC, cottage and duplexes (rented by Hetchy Operations staff seasonally [May through October]), and bunkhouse (occupied seasonally by the United States Forest Service fire department).

connection or additional plumbing work (i.e., the installation of a 2.5-inch lockable fee valve). Use of water from hydrants at Cherry Compound would not require additional plumbing work. Water required for construction would generate approximately 800 truck trips (averaging approximately one 2,000-gallon capacity truck per hour during the period of earthwork activities) from the water supply source to the project work areas, for a total of 1.6 million gallons (or 4.91 acre-feet). Cherry Lake (also referred to as Lloyd Lake) has a storage capacity of 273,500 acre-feet.[78] The temporary use of water during construction would be negligible relative to the amount available and would not result in the need for additional water supply, nor would it require relocation or construction of permanent new or expanded water facilities.

Portable toilet facilities would be provided at staging areas for workers' use. Sanitary facilities would be serviced by a vendor and sanitary waste would be hauled offsite for disposal. Construction wastewater would be minimal, primarily limited to wastewater resulting from washing operations required for the temporary and portable concrete mixing plant. Construction wastewater from washing operations would be collected, tested for hazardous substances, and disposed of offsite at an appropriate liquid waste facility in either Suisun City or Woodland, California. Construction wastewater collection could be performed using a portable concrete washout tank or other appropriate liquid waste container. Water pooled within the project work area, resulting from seepage through the slopes or from precipitation, may be pumped, tested and treated, as required, and if deemed clean may be used for dust control purposes and discharged to land, as allowed by permits that would be obtained by SFPUC. All temporary toilet facilities and construction wastewater storage facilities and equipment would be removed from the project site vicinity following construction. Therefore, project construction would not require relocation or construction of new or expanded wastewater treatment facilities.

There are no existing stormwater drainage systems in the project site vicinity. As discussed in Section E.17, Hydrology and Water Quality, under Impact HY-3, project construction would not affect existing drainage patterns in the project site vicinity, with the exception of the discharge channel which is the subject of the project. Therefore, the project would not result in the need for a new or expanded drainage systems.

Temporary diesel-powered generators would provide power supply for project construction activities. These generators would be removed after construction. Therefore, the project would not require the expansion of electrical infrastructure.

Operation of the project would not increase utility usage or demand or require expansion of utility systems. As discussed in Section E.3, Population and Housing (Impact PH-1), the project would not directly or indirectly induce growth and therefore would not create or induce a demand for new or expanded water, wastewater, or other infrastructure.

For these reasons, the project would not require or result in construction of new or expanded water, wastewater, or other utility infrastructure and there would be *no impact* related to this criterion.

[78] SFPUC, 2020 Urban Water Management Plan for the City and County of San Francisco, 2021, *https://www.sfpuc.gov/sites/default/files/programs/UWMP_2020.pdf*, accessed February 26, 2025.

Impact UT-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. (Less than Significant)

Cherry Lake has a storage capacity of 273,500 acre-feet.[79] As described under Impact UT-1, water required for project construction would be supplied from Cherry Lake, the valve house, or existing hydrants located within Cherry Compound, and an estimated total of 1.6 million gallons (or 4.91 acre-feet) of water would be needed for construction. Project construction would not affect the Cherry Lake Reservoir outlet works systems and tunnels that control reservoir levels and power generation. The temporary use of water during construction would be negligible relative to the storage amount available in Cherry Lake.

Project operations would not result in increased water volumes released from Cherry Lake. As stated under Impact UT-1, project operations would not induce permanent population growth directly or indirectly. The project would not generate demand for new water supply or create new water supply systems.

For the reasons described above, project construction and operation would have a *less-than-significant* impact related to availability of sufficient water supplies to serve the project and foreseeable future uses served by the Hetch Hetchy Water System during normal, dry, and multiple dry years.

Impact UT-3: The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant)

As discussed in Section E.3, Population and Housing, the project would not directly or indirectly result in new home construction or new jobs that would permanently increase wastewater flows. The project's construction workforce, with up to 10 workers on a given day, is expected to be commuting from the general region. Therefore, the project would not result in an increase in the local population that would require increasing the capacity of wastewater treatment in the local region.

During construction, portable toilets would be provided at staging areas for construction workers. Sanitary waste would be hauled offsite for disposal at a local treatment facility; the volume of wastewater from the project's small workforce would not be expected to exceed the capacity of existing treatment facilities.

Construction wastewater generated from washing operations (required for the temporary and portable concrete mixing plant) is estimated to be 7,000 gallons generated over the project construction duration. Water collection would be performed using a portable concrete washout tank or other appropriate liquid waste container, tested for hazardous substances, and disposed of offsite at an appropriate liquid waste facility in either the Yolo County Central Landfill at 44090 County Road 28H in Woodland, California, or the Waste Connections Potrero Hills Landfill at 3675 Potrero Hills Lane in Suisun City, California.

Water pooled within the project work area, resulting from seepage through the slopes or from precipitation, would be pumped, tested for hazardous substances onsite, treated onsite (as required), and if deemed clean may be used for dust control purposes and discharged to land, as allowed by permits that would be obtained by SFPUC. If is not deemed suitable for discharging to land, water would be disposed of offsite at an

[79] Ibid.

appropriate liquid waste facility at either of the locations listed above (i.e., either the Yolo County Central Landfill or the Waste Connections Potrero Hills Landfill).

Non-hazardous liquid wastes from commercial or industrial haulers may be accepted at the Yolo County Central Landfill only if the liquid is determined to meet the landfill's acceptance limits and criteria. Potential customers must complete a Liquid Waste Acceptability Application.[80] A Yolo County Central Landfill wastewater technician contacted by phone indicated that the landfill does not have a set daily wastewater throughput capacity, and that the only possible limiting factor to volume accepted is the capacity of the landfill's treatment ponds, which rarely are filled.[81] A Potrero Landfill representative indicated by phone that the Potrero Landfill can accept up to 50,000 gallons per day of liquid (i.e. "Special") waste that meets the landfill's waste acceptance screening criteria.[82] The Solid Waste Information System database website did not specify any capacity limitations for the volume of wastewater accepted or permitted at these two waste disposal facilities. Because the estimated total volume of wastewater produced during the duration of project construction would be considerably less than the daily maximum volume limits at these two facilities, wastewater treatment providers would have adequate capacity for the entire volume of wastewater produced by project construction in addition to the providers' existing commitments.

The Cherry Valley Dam and spillway are not part of a larger utility wastewater treatment system, and project operation would not create any new permanent demand for wastewater treatment, nor would project construction generate enough wastewater to result in inadequate treatment capacity.

For the reasons described above, the project's impact on wastewater treatment facilities would be *less than significant*.

Impact UT-4: The project would not generate solid waste in excess of state or local standards, or in excess of capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Less than Significant)

Project construction activities would generate approximately 20 to 40 cubic yards of nonhazardous solid wastes such as vegetation debris, packaging waste from construction materials, and miscellaneous wastes generated by workers onsite. Also, during the erosion protection phase of construction, approximately 60 to 80 cubic yards of excess grout would be removed from top surfaces of exposed riprap and hauled offsite for disposal at a permitted landfill. Excess soil and rock materials would be added to existing temporary stockpiles where feasible or placed in piles at staging area 2 and/or graded to blend with the existing slope in the staging area.

The number of construction workers onsite working concurrently would range from 6 to 10 workers. In 2023, solid waste generated by employees in unincorporated Tuolumne County was about 17.2 pounds per day per employee.[83] Using this waste generation factor, the project would generate approximately 172 pounds of solid waste per day at the peak of construction.

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[80] Yolo County Integrated Waste Management Division, Central Landfill website, *https://www.yolocounty.gov/government/general-government-departments/community-services/waste-acceptability-forms*, accessed February 26, 2025.
[81] Jones, Mary, Waste Technician, Yolo County Central Landfill (530-666-8858), telephone call with Jed McLaughlin, AECOM, March 3, 2025.
[82] Renee, Potrero Hills Landfill (707-432-4627), telephone call with Jed McLaughlin, AECOM, March 3, 2025.
[83] California Department of Resources Recycling and Recovery, Jurisdiction Diversion/Disposal Summary, 2007-2024, *https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006,* accessed February 26, 2025.

The SFPUC's contractor would be responsible for hauling and proper disposal of project-generated solid waste and compliance with all applicable waste reduction goals. Solid waste would be hauled to the Cal Sierra Transfer Station in Sonora[84] for recyclables sorting, and material not suitable for recycling would ultimately be disposed of at the Highway 59 Disposal Site landfill, which is operated by the Merced County Regional Waste Management Authority. The maximum permitted capacity of the landfill is 30,012,352 cubic yards, and the maximum permitted throughput is 1,500 tons per day. The remaining capacity (as of September 2005) is 28,025,334 cubic yards.[85] This landfill would have adequate capacity to accommodate the solid waste disposal needs of the project.

Project operation and maintenance would be similar to existing conditions and would not generate additional solid waste.

For the reasons described above, the project's impact with respect to solid waste disposal would be *less than significant.*

Impact UT-5: The project would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)

The California Integrated Waste Management Act of 1989 (Assembly Bill 939) established an integrated waste management hierarchy to guide local agencies in implementation of source reduction, recycling, composting, and environmentally safe transport and land disposal.[86] As discussed under Impact UT-4, the small volume of solid waste generated during project construction would be accommodated by the Cal Sierra Transfer Station in Sonora. The Tuolumne County Environmental Health Division is responsible for oversight of landfills and transfer stations in the county.[87] State policies and local oversight would ensure that project-generated waste transported for disposal at permitted landfills and transfer stations would be handled, transferred, processed, and/or disposed of in compliance with federal, state, and local statutes and regulations pertaining to solid waste. For these reasons, the project would not conflict with applicable regulations related to solid waste management, and the impact would be *less than significant.*

Impact C-UT: The project, in combination with cumulative projects, would not result in a significant cumulative impact on utilities and service systems. (Less than Significant)

The geographic scope for potential cumulative impacts on utilities and service systems includes the service areas for regional utility providers. The project would not directly or indirectly result in the construction of new development or new jobs that would induce growth and permanently increase demand for utilities. The project would not create a long-term need for relocation or construction of new or expanded facilities related to water supply, wastewater treatment, solid waste, stormwater drainage, or electric power. Therefore, the project would not contribute to a cumulative impact related to relocation or construction of utilities and service systems.

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[84] CalRecycle, SWIS Facility/Site Activity Details, Cal Sierra Transfer Station (55-AA-0010), *https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/885?siteID=3902*, accessed February 26, 2025.

[85] CalRecycle, SWIS Facility/Site Activity Details, Highway 59 Landfill (24-AA-0001), *https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2908?siteID=1863*, accessed February 26, 2025.

[86] CalRecycle, History of California Solid Waste Law, 1985-1989, *https://calrecycle.ca.gov/Laws/Legislation/CalHist/*, accessed September 11, 2024.

[87] Tuolumne County Environmental Health, *https://www.tuolumnecounty.ca.gov/244/Environmental-Health*, accessed November 21, 2024.

The cumulative projects listed in Table 6 would involve replacement of, or improvements to, existing infrastructure and recreation facilities and would not be expected to generate increased demand that would require permanent new or expanded utility systems. Additionally, none of the cumulative projects listed in Table 6 would be anticipated to add new permanent residents, employment, and/or housing to the area. For these reasons, there would be no permanent long-term increase in demand for utilities.

To the extent the construction periods for the project and these cumulative projects overlap, there could be a small increase in temporary employment and residents. However, given the nature of the projects, varied construction schedules, and the small increase in workers, there would be no new substantial cumulative demand on regional utility and waste service providers.

Therefore, project construction and operation, in combination with cumulative projects within the area, would not result in significant cumulative impacts on utilities and service systems. The cumulative impact related to utilities and service systems would be *less than significant*.

E.14 Public Services

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
PUBLIC SERVICES. Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 of the public services such as fire protection, police protection, schools, parks, or other public facilities?	☐	☐	☒	☐	☐

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 government facilities. (Less than Significant)

The project site is in the Stanislaus National Forest in Tuolumne County, California. The Fire and Aviation Management branch of the United States Forest Service provides fire protection services throughout Stanislaus National Forest in cooperation with the California Department of Forestry and Fire Protection and the Tuolumne County Fire Department.[88] According to the 2018 Tuolumne County General Plan Update Project, the Tuolumne County Emergency Medical Service Agency provides emergency and non-emergency response and medical transport services throughout unincorporated Tuolumne County, including the project site vicinity. The Tuolumne County Sheriff's Office provides law enforcement services to all unincorporated areas of the county and staffs the county jail; the California Highway Patrol Central Division provides additional traffic enforcement along state highways.[89] As described in Section E.3, Population and Housing, under Impact PH-1, the project would not be growth-inducing and would not cause a permanent increase in the local population. The project therefore would not generate new and permanent demand for public services, and there would be no need to expand governmental facilities within Tuolumne County.

The total number of construction personnel working at the project site would range from 6 to 10 workers per day. There is potential for construction personnel to call for assistance or response from public service facilities. However, given the relatively small workforce, the demand for such services is expected to be minimal and infrequent. Therefore, this analysis presumes that the demand could be accommodated by existing local public service providers without the need to physically alter or expand their facilities. Project implementation would not result in changes to existing, normal operations and maintenance, and no new permanent SFPUC staff would be needed. Therefore, the potential demand for public service assistance or

[88] National Park Service, Hetch Hetchy Communication System Upgrade Project Environmental Assessment, October 2007.
[89] Tuolumne County, Draft Recirculated Environmental Impact Report for the Tuolumne County General Plan Update Project, Section 3.14, Public Services, August 2018, *https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11305/Section-311-to-314*. Final Environmental Impact Report certified in December 2018. Accessed January 22, 2025.

response during project operations and maintenance activities would continue to be served by local providers without the need to expand these services.

Construction, operation, and maintenance of the project are not anticipated to permanently or substantially increase the demand on local fire protection, police, or other government services. As a result, the project would not affect the service ratios, response times, or other performance objectives for any public services, and therefore would not require the construction of new or physically altered facilities to maintain service. Consequently, there would be a *less-than-significant* impact related to the potential need for new or expanded public service facilities.

Impact C-PS: The project, in combination with cumulative projects, would not result in a significant cumulative public services impact. (Less than Significant)

The geographic scope for potential cumulative public service impacts encompasses the project site and surrounding vicinity in Tuolumne County. As discussed above, the project would have a less-than-significant impact on public services. Cumulative projects listed in Table 6 are improvements to existing infrastructure and recreational facilities that would not result in a permanent increase in population. Demand for public services could incrementally increase during the construction of these cumulative projects; however, these increases would be temporary and most construction activities associated with the cumulative projects would not occur simultaneously with the proposed project's construction, with the exception of the Eleanor Bridge Interim Repair Project. It is also expected that the operation of the cumulative projects would be predominantly staffed by current SFPUC and United States Forest Service staff. Therefore, the project in combination with cumulative projects would not result in significant cumulative impacts on public services. This impact would be *less than significant*.

E.15 Biological Resources

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
BIOLOGICAL RESOURCES. Would the project:					
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?	☐	☒	☐	☐	☐
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?	☐	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐

APPROACH TO ANALYSIS

Baseline conditions for biological resources at the project site are documented in the project's biological resources assessment[90] and are summarized in this section. The "project site" collectively refers to all work areas required to perform construction activities, including the project work area, road improvement areas, and staging areas. The description of baseline biological conditions was compiled through background research of available literature and data, a general biological field investigation, protocol-level surveys for

[90] AECOM, Biological Resources Assessment for the SFPUC Cherry Valley Dam Spillway Short Term Improvement Project, 2025.

rare plants, protocol-level surveys for raptors, a preliminary aquatic resource delineation of wetlands and waters of the United States and waters of the state (wetland delineation), and a tree inventory.

The following data sources were used to generate a list of special-status plants, special-status wildlife, and sensitive natural communities with the potential to occur in the project area:

- United States Fish and Wildlife Service Information for Planning and Consultation website:[91] official list of federal candidate, proposed, threatened, and endangered plant and wildlife species
- California Natural Diversity Database: a list of known plant occurrences, wildlife occurrences, and California Department of Fish and Wildlife-designated sensitive natural communities for the project site and a 5-mile buffer[92,93]
- California Native Plant Society online Inventory of Rare and Endangered Plants of California[94]
- Federal Register for selected species, including listing status and critical habitat
- Recovery plans for selected species to determine species' current and historical ranges

In addition, the eBird online database[95] was reviewed for information on distribution of listed species, as identified through the above resources, in the project area.

SPECIAL-STATUS PLANTS

Special-status plant species were defined as those designated as one or more of the following:

- Listed as or a candidate for listing as a threatened or endangered species under the federal Endangered Species Act; or
- Listed as or a candidate for listing as a threatened or endangered species under the California Endangered Species Act; or
- California Native Plant Society's California Rare Plant Rank of 1A, 1B, 2A, or 2B

Based on the database searches, 31 special-status plant species were identified and assessed for their potential to occur in the project area. The 31 species, their protection status, general habitat requirements, and potential to occur in the project area are listed in the biological resources assessment.[96] Of these, 28 species were determined to have low or no potential to occur in the project area due to a lack of suitable habitat, inappropriate elevational ranges, and/or a long distance to known occurrences (typically greater than 5 to 10 miles). Six replicate rare plant surveys of the project site were conducted over the spring and summer

[91] United States Fish and Wildlife Service, Information for Planning and Consultation Database, *https://ecos.fws.gov/ipac/*, accessed October 2024.
[92] California Department of Fish and Wildlife, California Natural Diversity Database, Biogeographic Data Branch, California Department of Fish and Wildlife, Commercial Version, September 2024.
[93] California Department of Fish and Wildlife, California Sensitive Natural Communities List, 2023, *https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities*, accessed June 1, 2023.
[94] California Native Plant Society, Rare Plant Program, Inventory of Rare and Endangered Plants of California (online edition), 2024, *http://www.rareplants.cnps.org*, accessed September 6, 2024.
[95] An online database of bird distribution and abundance managed by the Cornell Lab of Ornithology, *http://www.ebird.org*.
[96] AECOM, Biological Resources Assessment for the SFPUC Cherry Valley Dam Spillway Short Term Improvement Project, 2025.

of 2022 and 2024 by AECOM biologists. One special-status species was present in the project area, and two special-status species were determined to have a moderate or high potential to occur within the project area, as presented in **Table 8**.

Table 8 Special-Status Plant Species Observed or with Moderate or High Potential to Occur in the Project Area

Common and Scientific Name	Listing Status	General Habitat Description	Potential to Occur
Mariposa clarkia *Clarkia biloba* ssp. *australis*	CRPR 1B.2[1] USFS:S	Found in chaparral and foothill woodland. Elevation: 985 to 4,790 feet Blooming period: May through July	This species was observed in the project site during 2024 surveys, though the elevation of the project site is likely on the upper edge of the elevational range for this species. **Present**
Small's southern clarkia *Clarkia australis*	CRPR 1B.2[1] USFS:S	Found in foothill woodland and yellow pine forest. Elevation: 2,625 to 6,800 feet Blooming period: May through August	The nearest occurrence of this species is about 1.5 miles south of the project site and was documented on a forested roadcut, similar to habitats found in the project site. Suitable forested habitat is abundant in the project site, and the elevation of the project site is appropriate to support this species. This species was not documented during appropriately timed surveys. **High Potential**
yellow-lip pansy monkeyflower *Diplacus pulchellus*	CRPR 1B.2[1]	Lower montane coniferous forest, meadows and seeps Elevation: 1,970 to 6,560 feet Blooming Period: April to July	The nearest occurrence of this species is 3 miles southwest of the project site, and potentially suitable forest and meadow habitats are present in the project site. This species was not documented during appropriately timed surveys. **Moderate Potential**

Notes:
[1] California Rare Plant Ranks as defined by California Native Plant Society (2022a):
1B: Plants rare, threatened, or endangered in California and elsewhere.
2B: Plants that are rare, threatened, or endangered in California but more common elsewhere.
Threat Ranks:
.1: Seriously threatened in California (more than 80% of occurrences threatened/high degree of immediacy of threat)
.2: Moderately threatened in California (20 to 80% occurrences threatened/moderate degree and immediacy of threat)
.3: Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)
CRPR = California Rare Plant Ranking
USFS = United States Forest Service
S = Sensitive

SPECIAL-STATUS WILDLIFE

Special-status wildlife species were defined as those designated as one or more of the following:

- Species listed as, or proposed for listing as, threatened or endangered under the federal Endangered Species Act or California Endangered Species Act;
- Species considered as candidates for listing as threatened or endangered under the federal Endangered Species Act or the California Endangered Species Act;
- California Department of Fish and Wildlife Fully Protected species or Species of Special Concern;
- Bald and golden eagles protected by the federal Bald and Golden Eagle Protection Act; or
- Species that meet the definitions of rare or endangered species under section 15380 of the CEQA Guidelines

Based on the database searches, 18 special-status wildlife species were identified and assessed for their potential to occur in the project area. The 18 species, their protection status, general habitat requirements, and potential to occur in the project area are listed in the biological resources assessment.[97]

To support development of the biological resources assessment, AECOM biologists performed reconnaissance-level habitat suitability surveys and vegetation cover surveys on May 24, 25, and 26, 2022, and May 23, 2024, to assess habitat potentially used by special-status wildlife species. In addition, BioMaAS biologists conducted protocol-level surveys for raptors, including California spotted owl, great gray owl, golden eagle, bald eagle, and American peregrine falcon, on May 2, May 22 and June 12, 2024, and January 9, 2025 (for the golden eagle's courtship period). Additional surveys for raptors were performed on April 23, May 15, and June 24, 2025. Because there are no official protocol-level survey requirements specifically for the California spotted owl, the United State Fish and Wildlife Service-approved northern spotted owl protocol was implemented.

Of the 18 species initially identified by the literature search, five were determined to have a moderate potential to occur and one was determined to have a high potential to occur in the project area, as presented in **Table 9**. Potential for foraging and nesting was evaluated separately for special-status bird species.

CRITICAL HABITAT

The Federal Register was consulted for federally designated critical habitat in the project area. No designated critical habitat occurs in the vicinity of the project area.

[97] AECOM, Biological Resources Assessment for the SFPUC Cherry Valley Dam Spillway Short Term Improvement Project, 2025.

Table 9 Special-Status Wildlife Species with a Moderate or Higher Potential to Occur in the Project Area

Common and Scientific Name	Listing Status	Habitat Description	Potential to Occur
Townsend's big-eared bat *Corynorhinus townsendii*	SSC	The Townsend's big-eared bat occurs throughout California in mesic habitats characterized by coniferous and deciduous forests but also occupies a broad range of habitats. In California, it is known to occupy limestone caves, lava tubes, hollow trees or tree cavities, and human-made structures in coastal lowlands, cultivated valleys, and nearby hills covered with mixed vegetation. Most mating occurs from November to February; births occur in May and June, peaking in late May.	One California Natural Diversity Database occurrence of this species has been recorded within 5 miles of the project site; the occurrence was approximately 4.6 miles south of the project site, in 2014. Suitable roosting habitat for this species is present in the form of the Cherry Power Tunnel Adit adjacent to staging area 1a, and snags in the project work area. **Moderate Potential**
golden eagle *Aquila chrysaetos*	FP BGEPA	Golden eagles are a large, cliff-nesting eagle species. They forage in shrub lands, grasslands, and oak woodlands. This species prefers large trees or cliffs for nesting. A nesting pair requires a large hunting territory and plentiful prey for successful breeding.	No California Natural Diversity Database occurrences of this species are within 5 miles of the project site. eBird has six observations of this species within a 5-mile radius of the project site: three to the west, within 0.5 mile; and three to the east, within 1.75 miles. Given its large home ranges, this species has a high potential to fly over or forage in the project site. Suitable nesting habitat, in the form of large trees and large snags, is present around the project site; however, this species has a high sensitivity to human presence and urban areas, and campgrounds, roads, and water facilities are all present in the project area. No golden eagles were observed during the 2024 and 2025 protocol raptor surveys. **Foraging: Moderate Potential** **Nesting: Low Potential**
American peregrine falcon *Falco peregrinus anatum*	FP	This species occurs in woodland, forest, and coastal habitats. It nests on high cliffs near wetlands, lakes, rivers, or other waters. It is also found in urban areas and uses tall buildings and bridges for resting and breeding sites. Nests consist of a scrape on a depression or ledge in an open site.	There are no California Natural Diversity Database occurrences of this species within 5 miles of the project site. There are multiple eBird occurrences within 5 miles to the west of the project site. Peregrine falcons tend to be more tolerant of human presence and noise than other raptors; therefore, rocky cliffs in the canyons surrounding the project site may provide suitable nesting habitat for this species. Suitable foraging habitat for this species is present in the form of Cherry Lake, which attracts waterbirds. No peregrine falcons were observed during the 2024 and 2025 protocol raptor surveys. **Foraging: Moderate Potential** **Nesting: Moderate Potential**

Common and Scientific Name	Listing Status	Habitat Description	Potential to Occur
bald eagle *Haliaeetus leucocephalus*	SE, FP, BGEPA	This species winters throughout most of California at lakes, reservoirs, river systems, and some rangelands and coastal wetlands on protected cliffs and ledges. It also nests on bridges and buildings in urban areas. Nests are normally built in the upper canopy of large trees, usually conifers.	One California Natural Diversity Database occurrence of this species has been recorded within 5 miles of the project site; the occurrence was approximately 1.9 miles to the northeast of the project site, in 1997. There are several occurrences in eBird at Cherry Lake and at Lake Eleanor. During the 2024 protocol-level surveys for bald eagle, two adult pairs of bald eagles were observed successfully nesting at Cherry Lake, approximately 0.5 mile north and 1.8 miles northeast of the project site. During the 2025 protocol-level surveys for bald eagle, one adult pair of bald eagles was observed successfully nesting at Cherry Lake, approximately 0.5 mile north of the project site near the nest site observed in this area in 2024. Habitat in the project site is of low quality for bald eagle; however, Cherry Lake is present adjacent to the project site and provides high-quality foraging habitat. Therefore, this species has a high potential to fly over the project site while foraging in Cherry Lake. Suitable nesting habitat, in the form of large trees and large snags, is present around the project site. This species is sensitive to human presence and urban areas, and campgrounds, roads, and water facilities are all present in the project site. **Foraging: High Potential** **Nesting: Moderate Potential**
great gray owl *Strix nebulosa*	SE	This species nests in mid- or late-succession conifer forests containing large, broken-top snags (greater than 24 inches, diameter at breast height, particularly red and white firs) in the forest matrix in sufficient numbers (five to six snags per acre) to provide nest sites. In California, great gray owls nest in April. Incubation is performed only by the female, and brooding lasts 2 to 3 weeks. Young leave the nest 26 to 28.5 days after hatching. The species is generally found between 6,000 and 9,000 feet.	One California Natural Diversity Database occurrence of this species is within 5 miles of the project site. The record is 0.44 mile southeast of the project site and was recorded in 1989. eBird shows that the radius within 5 miles of the project site is within known great gray owl range. This species has a moderate potential to fly over or forage in the project site. Suitable nesting habitat for this species in the form of dense canopy cover forest adjacent to meadows is not present in the project site. No great gray owls were observed during the 2024 and 2025 protocol raptor surveys. **Foraging: Moderate Potential** **Nesting: Low Potential**

Common and Scientific Name	Listing Status	Habitat Description	Potential to Occur
California spotted owl *Strix occidentalis occidentalis*	SSC	California spotted owls are typically associated with mature forest types. The species breeds and roosts in forests and woodlands with large old trees and snags, dense canopies with multiple layers, and downed woody debris. Large, old trees are the key component for breeding habitat.	The California Natural Diversity Database contains 127 occurrences of spotted owl documented within 5 miles of the project site. Although the project site generally lacks dense canopy and old-growth forest conditions for nesting, the number of occurrences of this species in the vicinity of the project site indicates that this species has a moderate potential to fly through the area. Additionally, no California spotted owls were detected during protocol-level surveys for this species performed in 2024. During the 2025 protocol surveys, California spotted owls were detected east of Cherry Creek, in a location approximately 0.25-mile east of the project work area and approximately 400 feet east of staging area 1b. Owls were detected in the same approximate location during each of the 2025 surveys. A single male was observed during the first and third surveys, and a male and female were observed during the second survey. No evidence was observed of a nest nearby, and the owls did not display behavior typically associated with supporting an active nest (i.e., taking mice). Due to the lack of designated protected activity centers or home range core areas that overlap the project site, this species is unlikely to nest in the project site. **Foraging: Moderate Potential** **Nesting: Low Potential**

Notes:
BGEPA = Bald and Golden Eagle Protection Act
FP = fully protected
SE = State Endangered
SSC = Species of Special Concern

SENSITIVE NATURAL COMMUNITIES

The California Natural Diversity Database was referenced to determine whether any California Department of Fish and Wildlife-designated sensitive natural communities were previously documented in the project area.[98] The California Natural Diversity Database does not contain any records of sensitive natural communities within the project area. Additionally, no sensitive natural communities were identified in the project area during the habitat assessment and rare plant surveys for the project.

WETLANDS AND WATERS

The National Wetlands Inventory was reviewed for potential wetlands occurring in the project site vicinity, and the National Hydrography Dataset was reviewed for drainage features and their directional flow.[99] Satellite images of the project site vicinity were also examined to identify potential wetland or water features. Based on the desktop analysis, AECOM biologists conducted a preliminary aquatic resources delineation of wetlands and waters of the United States and waters of the state in the project area from May 25 to May 26, 2022, and on May 23, 2024. Areas suspected of being wetlands were delineated in accordance with the routine on-site methodology described in the United States Army Corps of Engineers Wetlands Delineation Manual; the Western Mountains, Valley, and Coast Region Supplement; and the Field Guide to Ordinary High-Water Mark Delineation for Non-Perennial Streams in the Western Mountains, Valley and Coast Region.

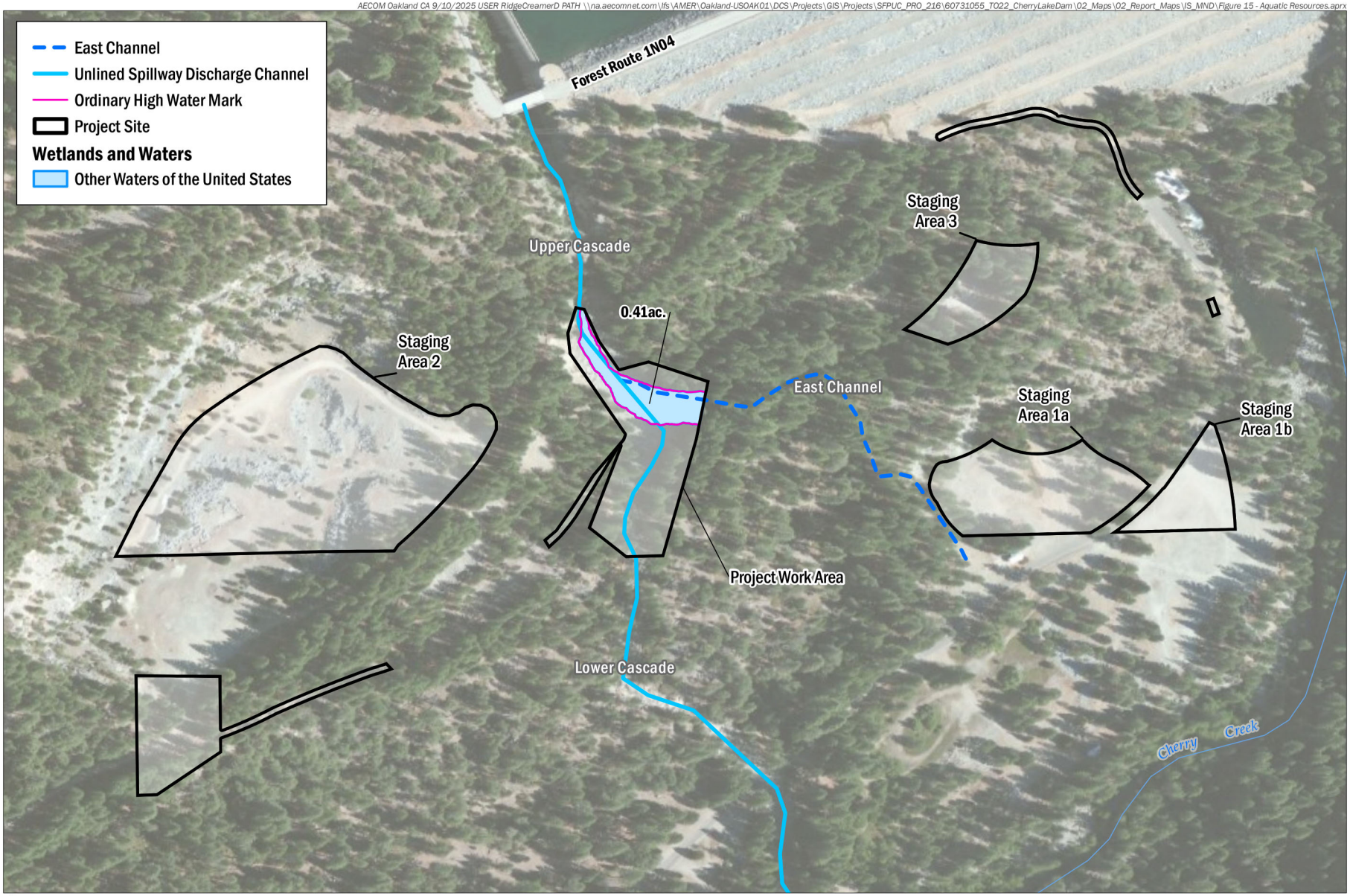
Approximately 0.41 acre of potential waters of the United States and waters of the state were identified within the project work area, all of which were delineated as other waters within the current discharge channel alignment (**Figure 15**).[100] No wetlands potentially subject to federal or state jurisdiction were identified.

TREES

A tree inventory was conducted at the project site on April 12, 2024, and September 3 through September 4, 2024, to document trees that may be removed as part of the project.[101] The survey identified approximately 315 trees that would be removed during project construction. This total includes approximately 240 trees measuring more than 4 inches in diameter at breast height; and 75 immature trees with a diameter at breast height of less than 4 inches. Trees identified for removal are mainly ponderosa pine (204 trees) and incense cedar (104 trees) but also include canyon live oak (two trees), interior live oak (two trees), red willow (two trees), and black oak (one tree).

[98] California Department of Fish and Wildlife, California Sensitive Natural Communities List, 2023, *https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities*.
[99] United States Geological Survey, National Hydrography Dataset and Watershed Boundary Dataset, 2022, *https://www.usgs.gov/core-science-systems/ngp/national-hydrography*, accessed January 3, 2022.
[100] AECOM, Cherry Valley Dam Spillway Short-Term Improvement Project Preliminary Aquatic Resource Delineation, 2025.
[101] GEI Consultants, Quantitative Tree Inventory - Cherry Valley Dam Spillway Short-Term Improvements Project, November 2024.

AECOM Oakland CA 9/10/2025 USER RidgeCreamerD PATH \\na.aecomnet.com\lfs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\SFPUC_PRO_216\60731055_T022_CherryLakeDam\02_Maps\02_Report_Maps\IS_MND\Figure 15 - Aquatic Resources.aprx



San Francisco Public Utilities Commission
Cherry Valley Dam Spillway Short Term Improvement Project

FIGURE 15
Aquatic Resources

Impact BI-1: Construction of the project could have a substantial adverse effect, either directly or through habitat modifications, on 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 United States Fish and Wildlife Service. (Less than Significant with Mitigation)

CONSTRUCTION

Project construction could have an adverse effect on special-status species that have the potential to occur on the project site or in the nearby surrounding area. The effects could be direct (e.g., harassment or take of an individual) or indirect (e.g., modifying existing habitat which then adversely disrupts foraging and nesting efforts). Construction activities that could cause impacts on special-status wildlife and plant species or their habitats include tree removal, ground disturbance (e.g., grading and excavation), and added noise and visual disturbances from equipment operation and human presence.

Impacts on special-status plants would be considered significant if the project would remove critical populations, reduce the reproductive capacity of the species in a geographic area, or otherwise decrease the viability of the species. Impacts on special-status wildlife would be considered significant if the project would cause injury or mortality of a listed species, remove critical wildlife habitat elements required for reproduction and/or survival, modify occupied or suitable habitat for the species, and/or significantly reduce the viability of local populations.

Special-Status Plants

Mariposa clarkia is the only special-status plant present in the project site based on the floristic surveys conducted for this analysis. Although Small's southern clarkia and yellow-lip pansy monkeyflower have high and moderate potential to occur, respectively, in the project site based on habitat suitability; these species were not observed during appropriately-timed floristic surveys and are presumed absent from the project site and would therefore not be impacted by project construction. During the floristic surveys, about 30 Mariposa clarkia individuals were found in staging area 1a. This population occurs on a pile of rock and soil, within a whiteleaf manzanita chaparral vegetation community.[102]

Construction staging could result in direct and indirect impacts on Mariposa clarkia. Direct impacts could include mortality of individuals and disturbance to the seedbank, and indirect impacts could result from the removal or degradation of habitat for these species through the introduction of invasive species. Mariposa clarkia is locally abundant in the project site vicinity and thrives in disturbed areas, as evidenced by the locations where it has been observed to date.[103] Therefore, the potential crushing of a relatively small number of individual Mariposa clarkia plants and potential disturbance to the seedbank from construction staging activities are anticipated to have a negligible effect on the distribution and abundance of the local metapopulation. Due to this species' affinity for disturbed areas, natural recolonization of Mariposa clarkia in areas disturbed by construction is anticipated. Consequently, the only potentially significant impact on the species that could result from the implementation of the project is associated with the potential for construction activities, including personnel, materials, and equipment, to introduce invasive plant species. Once introduced, invasive plant species often spread readily and can outcompete native species such as

[102] AECOM, Biological Resources Assessment for the SFPUC Cherry Valley Dam Spillway Short Term Improvements Project, 2025.
[103] Ibid.

Mariposa clarkia, potentially limiting the ability of native species to recolonize previously occupied areas following construction disturbance, which could result in a *potentially significant impact*.

This impact would be reduced to a less-than-significant level by implementing **Mitigation Measure M-BI-1a (Worker Environmental Awareness Training)**, which requires that (1) workers be provided with environmental awareness training that familiarizes them with known sensitive resource areas in the project vicinity that are delineated on the project plans or on site to be avoided and/or protected, (2) restrictions limiting work and staging are applied to approved areas of the project site, and (3) known noxious or invasive weeds in or near the work areas are removed, and best management practices for minimizing their spread are implemented. With the implementation of these measures, potential impacts on special-status plants from construction would be *less than significant with mitigation*.

Mitigation Measure M-BI-1a: Worker Environmental Awareness Training

A project-specific, language-appropriate worker environmental awareness program training shall be developed by a qualified biologist for the project and attended by all construction personnel prior to beginning work onsite (i.e., training materials shall be made available in a language adequately understood by the participants). As part of the training, brochures shall be given to provide reference material to contractors. The training shall be provided by the qualified biologist or by designated SFPUC staff trained by the biologist to provide this training, using the materials developed by the qualified biologist, and may be administered via a video-recorded training produced specifically for the project by a qualified biologist. The worker environmental awareness program training shall at a minimum 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 and wildlife species with the potential to occur at or in the vicinity of the project site, avoidance measures, and a protocol for reporting the discovery, harm, injury, or mortality of any such species, including a detailed communication chain
- Preconstruction surveys and biological monitoring requirements associated with certain work activities (e.g., vegetation removal, tree trimming, etc.)
- Known sensitive resource areas in the project vicinity that are delineated on the project plans or on site to be avoided and/or protected, including biologist-established buffers for nesting birds (if applicable based on presence), as well as restriction of work and staging to the approved project site
- Known noxious or invasive weeds at or near the project site, and best management practices for minimizing their spread
- Best management practices and their location at the project site for erosion control and/or species exclusion

Special-Status Wildlife

Bald Eagle. Bald eagles require large, mature trees or snags in remote locations near water for nesting. They nest in stick-platform nests in large, mature, or dominant live trees such as pines, usually with open foliage, 50 to 200 feet above the ground. Bald eagles typically begin breeding in February, and adults can sometimes tolerate human activity in the vicinity of their nests but can abandon their nests in response to human activity as well. Breeding bald eagles occupy "territories," areas they will typically defend against intrusion by other eagles. Bald eagles exhibit high nest site fidelity and nesting territories are often used year after year. In addition to the active nest, a territory may include one or more alternate nests (nests built or maintained by the eagles but not used for nesting in a given year).

During the 2024 protocol-level surveys for bald eagle, two adult pairs of bald eagles were observed successfully nesting at Cherry Lake, approximately 0.5 mile north and 1.8 miles northeast of the project site; both nests were active with one juvenile during the survey period from May to June.[104] During the 2025 protocol-level surveys for bald eagle, one adult pair of bald eagles was observed successfully nesting at Cherry Lake, approximately 0.5 mile north of the project site near the nest site observed in this area in 2024. [105]The two nests observed in 2024 are separated by approximately 2 miles. Suitable nesting habitat, in the form of large trees and large snags, is present around the project site. Foraging habitat is not present within the project site, but high-value foraging habitat is present adjacent to the project site at Cherry Lake, which has an abundance of prey, including fish and small mammals. This species has been observed flying over Cherry Creek near the project site while foraging in the reservoir, although this species is not expected to forage within the project site.

The project would not result in injury or mortality of bald eagles given the known nest locations are approximately 0.5 mile or farther from the project site. Project construction would require the removal of approximately 315 trees, including trees that provide suitable bald eagle nesting habitat. No nests are present in the project site and given the abundance of suitable forest habitat in the surrounding vicinity, the removal of these trees would not significantly impact the availability of bald eagle nesting habitat.

Visual and noise disturbance arising from construction activity have the potential to disrupt normal nesting behavior and negatively affect reproductive success of eagles, depending on the intensity and distance of the activity from the nest. For most types of human disturbance (excluding non-motorized human activity), United States Fish and Wildlife Service guidance[106] recommends a 660-foot no-disturbance buffer surrounding bald eagle nesting sites; a 0.5-mile (2,640-foot) buffer is recommended for blasting and other loud, intermittent noises.

The project site is approximately 0.5 mile from the nearest known nest site. Blasting and other similar loud, intermittent noises would not occur during project construction; therefore, the 0.5-mile buffer would not apply to the project. It is reasonably assumed that eagles currently using the nest are exposed to a variety of natural and anthropogenic sounds, including noise from vehicular traffic, motorized watercraft, aircraft, human voices, and high winds. Noise from heavy equipment operation at the project site during construction would be attenuated by the distance between the nest location and the project site. Moreover, intervening terrain and landforms obstruct direct views of the project site from the nest and would further

[104] BioMaAS, 2024 Raptor Surveys for the Cherry Valley Dam Spillway Short Term Improvements Project, 2025.
[105] BioMaAS, 2025 Raptor Surveys for the Cherry Valley Dam Spillway Short Term Improvements Project, 2025.
[106] United States Fish and Wildlife Service, Recommended Buffer Zones for Human Activities around Nesting Sites of Bald Eagles in California and Nevada, December 2017.

reduce the potential for disturbance from construction noise. No project construction activities would occur within 660 feet of the nest site; however, if construction water supply is obtained from Cherry Lake, it would require installation of a water pump located near the boat launch, which is located approximately 750 feet from the nest and in the direct viewshed of the nest, as well as regular truck trips to the boat launch to obtain water during construction. This activity would be outside the recommended 660-buffer and would be similar to existing human activity from use of the boat launch and therefore would not be expected to adversely impact eagle nesting behavior and reproductive success.

Under the double-shift construction scenario, nighttime lighting would be required at the project work area and staging area 2 and could be visible from the nest. Any nighttime lighting effects at the nest would be indirect (skyglow), not direct (unimpeded passage of light), due to the intervening trees and topography. Because the SFPUC would implement its Standard Construction Measure #8 (Visual and Aesthetic Considerations), which requires that nighttime lighting have shields to prevent light spillover effects, disturbance of nesting activities from nighttime lighting is not expected.

Based on the above analysis, project construction is not expected to result in direct injury or mortality of bald eagles or adverse effects related to habitat modification or breeding and nesting. However, given the documented presence of nesting bald eagles in the vicinity of the project site, project construction could disrupt breeding and nesting activities if bald eagle nest locations were to change in the future and be closer to the project work areas where they could be subject to visual disturbance or exposed to increased levels of construction noise. These factors could result in modification of behavior detrimental to reproductive success, or nest abandonment. As a result, the impact on bald eagle would be *potentially significant*.

To reduce this potential impact, **Mitigation Measure M-BI-1a (Worker Environmental Awareness Training)** and **Mitigation Measure M-BI-1b (Raptors and Migratory Bird Nesting Survey and Protection Measures)** would be implemented. **Mitigation Measure M-BI-1a** requires that workers be provided with environmental awareness training, which would familiarize them with the requirements that would prevent worker behavior from disturbing wildlife at the site. This training would also familiarize workers with sensitive species at the project site, and with the physical characteristics and types of activities that disturb nesting bald eagles. **Mitigation Measure M-BI-1b** requires that pre-construction nesting bird surveys be performed during the nesting season; if active nests are discovered and could be impacted by project construction, an appropriate avoidance buffer or other appropriate measures to avoid disturbance would be implemented so that bald eagles would not be significantly affected. With the implementation of these measures, potential impacts on bald eagle from construction would be *less than significant with mitigation*.

Mitigation Measure M-BI-1b: Raptors and Migratory Bird Nesting Survey and Protection Measures

To the extent feasible, tree removal and trimming shall be conducted from September 1 to February 28, which is outside of nesting season. To protect raptors and nesting migratory birds, the SFPUC shall retain a qualified wildlife biologist to conduct pre-construction surveys for nesting raptors and migratory birds prior to the commencement of construction activities that occur between March 1 and August 31 of a given year. The surveys shall be conducted a maximum of 14 days prior to the start of construction during the nesting season. The project site (inclusive of the project work area, staging areas, and road improvement areas) plus a 660-foot buffer surrounding the project site shall be surveyed for nesting bald eagles; the project site plus a 300-foot buffer shall be surveyed for nesting raptors (excluding bald eagles); and the project site plus a 50-foot buffer shall be surveyed for other nesting birds, such as passerines, protected under the Migratory Bird Treaty Act. For the California spotted owl,

surveys shall be undertaken in areas where the protected activity centers or home range core areas overlap with the 0.25-mile buffer around the project site. A nest is defined to be active for raptors if there is a pair of birds displaying reproductive behavior (i.e., courting) at the nest, and/or if the nest contains eggs or chicks. For other migratory birds and passerines, a nest is defined as active if it contains eggs or chicks. If no active nests are detected, no additional action would be required. Nesting deterrents, such as mylar foil or noise deterrents, may be implemented prior to nesting season to deter birds from nesting in the project site.

If active nests are found during the pre-construction nesting survey, the wildlife biologist shall evaluate whether the schedule of construction activities could affect the active nest, and the following measures shall be implemented based on the biologist's 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 that there is no adverse effect on nest success and may revise the determination at any time during the nesting season.

- If construction (including tree removals or trimming) may affect the active nest, the biologist shall establish a no-disturbance buffer, taking into account the sensitivity of the species involved; visibility (i.e., line of sight) between the nest and construction; and the level of project and ambient activity (i.e., if the nest is adjacent to a road). All project work shall halt (including tree removals or trimming) within the buffer until a qualified biologist determines that the nest is no longer in use.

- Any work that the SFPUC and their contractor determine must occur within established no-disturbance buffers around active nests and is deemed appropriate by the qualified biologist (e.g., vegetation or tree removal, grading, work with hand tools, etc.) shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest, work shall halt until the nestlings fledge.

- No-disturbance buffers for passerines shall be 25 feet or greater, and 300 feet or greater for most raptors (except bald eagle); no-disturbance buffers for bald eagle nest shall be a minimum of 660 feet.

- For bird species that are federally and/or state-listed special-status species (i.e., threatened, endangered, fully protected, or Species of Special Concern), an SFPUC representative, supported by the wildlife biologist, shall consult with the United States Forest Service, U.S. Fish and Wildlife Service, and/or California Department of Fish and Wildlife (as appropriate) regarding appropriate nest buffers.

- Removing inactive passerine nests may occur at any time. Inactive raptor nests shall not be removed unless a qualified biologist or SFPUC Representative has first consulted with the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife.

- Most birds that begin nesting within a survey buffer during construction and following the pre-construction survey are assumed to be habituated to construction-related or similar noise and disturbance levels, and exclusion zones around nests may be reduced or eliminated in these cases as determined by the qualified biologist. However, this provision does not apply to bird species that are federally and/or state-listed special-status species (i.e., threatened, endangered, fully protected, or

Species of Special Concern). Protective measures listed above shall continue to be implemented for these species if they begin nesting within a survey buffer during construction and following the pre-construction survey.

Golden Eagle, Great Gray Owl, American Peregrine Falcon, California Spotted Owl, and Other Nesting Birds. There are no known nests for golden eagle, great gray owl, American peregrine falcon, or California spotted owl in the project site vicinity. Golden eagles, great gray owl, and California spotted owl have a low potential to nest in the project site due to a lack of suitable habitat or presence of higher-quality nesting habitat in surrounding areas but may forage in the area. American peregrine falcon has moderate potential to both forage and nest in the project area. Common nesting birds that are protected by the Migratory Bird Treaty Act also have the potential to forage and nest in the project area.

Because peregrine falcons nest on cliffs, project tree removal would not result in the loss of nesting habitat for peregrine falcons. Project construction would require the removal of approximately 315 trees. In addition, select trees adjacent to the project work area and/or road improvement areas, and in the staging areas, may require pruning to improve sight distance and/or allow equipment access. Given the abundance of similar habitat in the surrounding forests, impacts from loss of nesting bird habitat due to tree removal and trimming would not be significant.

In the absence of an occupied nest, other impacts (e.g., on foraging behaviors) on golden eagle, great gray owl, American peregrine falcon, or California spotted owl are not anticipated from construction activities because there is sufficient foraging habitat in the surrounding forest lands, and these species could forage in areas away from the construction activities if deterred from the project site by construction noise and human presence. However, construction activities could result in impacts if individuals of these species (or other common birds) choose to nest near active construction. Elevated noise levels and increased human presence during construction could result in modification of behavior detrimental to reproductive success, or nest abandonment. As a result, the impact on golden eagle, great gray owl, American peregrine falcon, and California spotted owl would be *potentially significant*.

To reduce this potential impact, **Mitigation Measure M-BI-1a (Worker Environmental Awareness Training)** and **Mitigation Measure M-BI-1b (Raptors and Migratory Bird Nesting Survey and Protection Measures)** would be implemented. **Mitigation Measure M-BI-1a** requires that workers be provided with environmental awareness training, which would familiarize them with the requirements that would prevent worker behavior from disturbing wildlife at the site, including special-status birds, and for maintaining any established buffer zones for nesting birds. **Mitigation Measure M-BI-1b** requires that pre-construction nesting bird surveys be performed during the nesting season; if active nests are discovered and could be impacted by project construction, an appropriate avoidance buffer or other appropriate measures to avoid disturbance would be implemented so that nesting birds, including golden eagle, great gray owl, American peregrine falcon, and California spotted owl, would not be significantly affected. With the implementation of these measures, potential impacts on golden eagle, great gray owl, American peregrine falcon, and California spotted owl from construction would be *less than significant with mitigation*.

Townsend's Big-Eared Bat. The project site is within the geographic range of Townsend's big-eared bat and contains suitable roosting habitat in the form of the Cherry Power Tunnel Adit near staging area 1a and hollow tree snags near staging area 3. The nearest documented occurrence of this species is approximately 5.7 miles southeast of the project site. Due to the wide range of this species and the presence of suitable

foraging and roosting habitat, Townsend's big-eared bat have a moderate potential to roost or forage in the project area.

No work would occur in the Cherry Power Tunnel Adit. However, construction activities, including tree removal, generally could result in the direct mortality of individual bats in day roosts and in the loss of bat day roosts, night roosts, and maternity and nonbreeding colonies. In addition, the noise, lights, and presence of construction during the nighttime work periods under the double-shift scenario could cause modifications to bat feeding activities and nighttime emergence habits, or it could cause local populations to temporarily disperse elsewhere during active construction. If an active bat roost occurs near enough to the project site that the colony is disturbed by elevated noise or increased human presence associated with construction activities, the bats may abandon the roost. If it is a maternity roost, this could result in the abandonment and mortality of young bats that are not yet able to fly. The mortality of an individual special-status bat would be a *significant impact*.

To reduce this impact, **Mitigation Measure M-BI-1a (Worker Environmental Awareness Training)** and **Mitigation Measure M-BI-1c (Avoidance and Minimization Measures for Maternity Roosts and Special-Status Bats Day Roosts)** would be implemented. **Mitigation Measure M-BI-1a** requires that workers be provided with environmental awareness training, which would familiarize them with the requirements that would prevent worker behavior from disturbing wildlife at the site, including special-status bats. **Mitigation Measure M-BI-1c** requires that potentially affected bat roosts, including maternity and day roosts, within 25 feet of the project site be identified and located. **Mitigation Measure M-BI-1c** also requires that, if maternity bat roosts are identified, an avoidance buffer be established. In addition, **Mitigation Measure M-BI-1c** provides methods by which eviction from day (nonmaternity) roosts can occur without resulting in a significant impact (i.e., by reducing the potential for mortality). With the implementation of these measures, impacts on special-status bat species would therefore be *less than significant with mitigation*.

Mitigation Measure M-BI-1c: Avoidance and Minimization Measures for Maternity Roosts and Special-Status Bats Day Roosts

A survey for roosting bats and potential roost habitat shall be conducted by a qualified biologist prior to the commencement of construction activities that have the potential to disturb special-status bat day roosts or maternity roosts of any bat species through elevated noise levels or removal of trees, as determined by the qualified bat biologist. Areas within 25 feet of the project work area, staging areas, and road improvement areas shall be assessed to determine whether they provide high potential for roost sites. If a visual survey is not adequate to determine the presence or absence of bats (such as in tree cavities), acoustic equipment or other methods recommended by the qualified biologist shall be used to determine potential occupancy and species composition. If no active roosts are found, then no further action is warranted.

If special-status bat day roosts or maternity roosts of any bat species are found, the following measures shall be implemented:

- Trees shall be trimmed or removed or bat exclusion devices shall be installed when bats are active and able to relocate of their own volition, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of the bat maternity roosting season (approximately April 15 to August 15) if a maternity roost is present; and outside the months of winter torpor (approximately

October 15 to February 28, or as determined by a qualified biologist experienced in the identification of special-status bats).

- Maternity Roosts: If a maternity roost of any size supporting any bat species (special-status and non-special-status) is detected during surveys, an avoidance buffer around the active roost, as determined by a qualified bat biologist, shall be maintained from April 1 until the young are flying, typically after August 31.

- Special-Status Bat Day Roosts: If a day roost of any special-status bat is found in a tree planned for removal, the bats shall be safely evicted under the direction of a qualified bat biologist. Eviction shall occur as a multi-step process to make suitable habitat less desirable for special-status bats by (1) removing surrounding trees that are determined to not contain suitable roosts (if surrounding trees are identified for removal); (2) limbing trees determined to potentially contain roosting sites; and (3) removing potential roosting trees.

  In some circumstances, the qualified bat biologist may allow roosting bats to continue using a roost while construction is occurring near the roost site. For example, if it is determined that the risks to bats from eviction (e.g., increased predation or exposure, or competition for roost sites) are greater than the risk of roost abandonment (resulting from construction), then the bats shall not be evicted.

OPERATION

Routine project operations and maintenance would be similar to existing conditions and would therefore not result in new impacts on special-status plants or wildlife. As a result, impacts during operations would be *less than significant.*

SUMMARY

Implementation of **Mitigation Measures M-BI-1a** through **M-BI-1c** would reduce potentially significant impacts on special-status plant and wildlife species from construction of the project. Impacts from project operations would be less than significant. Overall, impacts under this criterion would be *less than significant with mitigation.*

Impact BI-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service. (No Impact)

Natural communities are identified and ranked with the same system used to assign global and state rarity ranks for plant and animal species in the California Natural Diversity Database. Natural communities with ranks of S1 through S3 are considered sensitive natural communities. No sensitive natural communities are present within the project site.[107] Additionally, no riparian habitat is present within the project site. The project area is in a man-made spillway channel subject to intermittent seepage flows from the dam or precipitation from the immediate area. Flows have not supported the development of riparian habitat along the steep side slopes, which are composed primarily of landslide debris. Furthermore, alteration of the channel from the landslides and the presence of landslide debris preclude delineation of the top of bank.

[107] AECOM, Biological Resources Assessment for the SFPUC Cherry Valley Dam Spillway Short Term Improvements Project, 2025.

Accordingly, trees that would be removed along the discharge channel are not considered riparian. Therefore, there would be *no impact* on sensitive natural communities.

Impact BI-3: The project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) or other waters through direct removal, filling, hydrological interruption, or other means. (Less than Significant)

CONSTRUCTION

There are no state or federally jurisdictional wetlands in the project site. The current alignment of the discharge channel meets the criteria for a water of the United States and state, and accounts for 0.41 acre within the project work area. The current discharge channel was formed after the 2010 storm event (see Section A.2.2, Cherry Valley Dam Spillway, for more detail), which resulted in some flooding and the formation of a pathway east of the original spillway channel (referred to as the east channel). Presently, the east channel conveys intermittent water from the Cherry Lake spillway to Cherry Creek during seasonal leakage through weepholes in the spillway abutment and through the flashboards installed on the crest of the spillway. Flows in the discharge channel may be considered relatively permanent, as they are continuous during portions of each year and are not in direct response to precipitation. Accordingly, the current discharge channel (which presently includes the east channel formation) is likely considered a water of the state and a water of the United States. However, the original (historical) spillway south of the east channel does not convey water or show signs of recently conveying water; therefore, it is not likely a jurisdictional feature.[108]

Permanent impacts to approximately 0.25 acre of the jurisdictional federal and state waters in the discharge channel would result from construction of the armored fill embankment and installation of erosion protection (granular bedding and grouted riprap). Approximately 0.1 acre of temporary impacts to the discharge channel would result from development of a temporary access route within the channel for heavy equipment and vehicles traveling within the channel for the purpose of constructing the project. Any temporary recontouring of the discharge channel for equipment and vehicle travel access would be recontoured to restore the historical channel alignment following construction.

The purpose of the project is to restore the historical channel alignment and permanently remove the east channel formation. Removal of the east channel and restoration of the historical channel alignment would be a self-mitigating feature of the project because the flow of the historical discharge channel from the repair area south to Cherry Creek would be restored, which is a more natural feature with a bed and bank, as compared to the east channel that currently carries occasional flows. Furthermore, the east channel does not have capacity to sustainably support heavy flows, and use of this channel creates risk of flood hazard to the Cherry Power Tunnel Adit and dispersed camping areas downstream of the dam. It also is expected that restoration of the historical discharge channel would reduce erosion along the east channel and could thereby result in a net benefit to water quality.

Projects involving fill of a wetland or water of the United States or a water of the state must comply with federal and state regulations to avoid, minimize, and mitigate (if required) the effects. Accordingly, the SFPUC would obtain permits for impacts on hydrologic features, including a United States Army Corps of Engineers Clean Water Act section 404 Nationwide Permit, a Regional Water Quality Control Board Clean

[108] AECOM, Cherry Valley Dam Spillway Short-Term Improvement Project Preliminary Aquatic Resource Delineation, 2025.

Water Act section 401 Water Quality Certification, and a California Department of Fish and Wildlife Lake or Streambed Alteration Agreement. Because the SFPUC must obtain these permits and comply with the permit conditions identified by the above-listed regulatory agencies to implement the project and because the project would be self-mitigating (i.e., permanent impacts to jurisdictional waters would be offset by the project benefits as described above), and no net loss of waters of the United States or waters of the state would occur, impacts on protected wetlands and other water features would be *less than significant.*

OPERATION

Project implementation would not include changes to existing, normal operations and maintenance. As described above, once operational the restored historical channel alignment would likely become a jurisdictional other water of the United States and state, as it would convey intermittent water from the Cherry Lake Spillway to Cherry Creek. The project would alter the flow of water but would not result in net loss of waters or wetlands. Therefore, impacts associated with operations would be *less than significant*.

Impact BI-4: The project would not 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. (Less than Significant)

The project work area would occupy approximately 1.7 acres, and staging areas would collectively occupy 8.3 acres of land within Stanislaus National Forest. The project work area would be along the discharge channel, which does not currently provide any particularly important habitat connectivity. In addition, the channel does not hold water permanently and does not provide habitat for fish. The road improvement work would occur along existing roadways, and the proposed staging areas are located in areas that have already been disturbed. Moreover, the project work and staging areas are unlikely to create a barrier to species movement or migration due to their relatively small size in comparison to nearby habitat in adjacent natural lands in Stanislaus National Forest.

The project would temporarily introduce additional noise in the vicinity of construction work and staging areas. In addition, nighttime construction lighting would be required under the double-shift scenario. This additional noise and lighting could result in modifications to species behavior (migrating birds in particular) in the vicinity of the project site. However, additional noise and lighting are not anticipated to result in significant impacts on migrating birds, because the project site is limited to discrete construction and staging areas that are relatively small when compared to the amount of suitable habitat that can be used by migrating birds in the project vicinity. Furthermore, the SFPUC would implement its Standard Construction Measure #8 (Visual and Aesthetic Considerations), which requires that nighttime lighting have shields to prevent light spillover effects.

Project operations and maintenance would be similar to existing conditions and would therefore not result in new structures or activities that could impede the movement or migration of fish or wildlife species. As a result, the project would have a *less-than-significant impact* related to this criterion.

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

The Tuolumne County General Plan designates the project site for public use. The public designation identifies the project work areas and staging areas as land owned by the United States Forest Service and

recognizes that this land is exempt from county land use regulations.[109] Therefore, no local policies or ordinances protecting biological resources apply to the project site and there would be *no impact*.

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. (No Impact)

The project is not subject to any habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans. The project would therefore not conflict with the provisions of any such plans and would have *no impact.*

Impact C-BI: The project, in combination with cumulative projects, could result in a significant cumulative impact on biological resources. (Less than Significant)

The geographic scope for the analysis of cumulative impacts on sensitive biological resources relative to the project is limited to the consideration of other identified cumulative projects that could significantly affect the same sensitive biological resources as the project. Reasonably foreseeable future projects in the vicinity of the project are detailed in Table 6. SFPUC projects listed in this table, including Cherry Oil (Lake) Road Repair and Paving Operation and Maintenance Activities, the Cherry Compound Power System Upgrades Project, the Cherry Dam Leakage Weirs Replacement Project, and the Public Resources Code Section 4292 Pole Equipment Replacement Project, are in the vicinity of the project. In addition, the Eleanor Bridge Interim Repair Project may use some of the same staging areas as the proposed project, but only for material and equipment storage, construction vehicle parking, and shared use of construction trailers. These projects may have potential construction-related impacts on special-status species similar to those of the project. Cumulative effects could be potentially significant and include alteration of natural habitats through ground-disturbing activities; disturbance to wildlife behaviors, such as nesting; or injury to special-status wildlife. However, similar to the project, these other SFPUC projects would implement SFPUC Standard Construction Measures (which include provisions to protect biological resources); would implement mitigation measures, if required by project-specific environmental review pursuant to CEQA; would comply with state and federal regulations that require preservation and management of sensitive biological resources; and, if necessary, would obtain permits that would include review and approval by regulatory agencies (e.g., United States Fish and Wildlife Service). The only non-SFPUC project close to the proposed project with potential to affect the same special-status wildlife is the Cherry Lake Boat Launch Improvement Project. Although the full details of this project are unknown at the time of preparation of this initial study, as indicated under Impact BI-1, the boat launch is approximately 750 feet from a known bald eagle nest; however, at this distance the launch is beyond the typical 660-foot non-disturbance buffer required by the United States Fish and Wildlife Service for construction. It is assumed the project would be sponsored by the United States Forest Service and would be subject to compliance with the National Environmental Policy Act, including implementation of mitigation measures, if required by project-specific environmental review; would comply with federal regulations that require preservation and management of sensitive biological resources; and, if necessary, would obtain permits/approvals from regulatory agencies (e.g., United States Fish and Wildlife Service) to comply with federal regulations protecting special-status

[109] Tuolumne County, Draft Recirculated EIR for the General Plan Update Project, 2018, *https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report*, accessed September 18, 2024.

wildlife. Therefore, cumulative projects, together with the proposed project, would not result in a significant cumulative impact on special-status species.

The project would have no impact on wetlands and would not contribute to any potential impact on wetlands. None of the cumulative projects would affect the same regulated surface waters of the United States and state (i.e., the discharge channel); therefore, no cumulative impacts on these resources would occur.

Similarly to the project, the cumulative projects involve construction work in discrete locations for improvements to existing infrastructure, and the construction areas are relatively small size in comparison to nearby habitat in adjacent natural lands in Stanislaus National Forest. Therefore, cumulative projects, together with the proposed project would not result in significant cumulative impacts on wildlife movement or migration.

Overall, cumulative impacts on biological resources would be *less than significant*.

E.16 Geology and Soils

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
GEOLOGY AND SOILS. Would the project:					
a) Directly or indirectly cause 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.	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒	☐
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 waste water?	☐	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒	☐

The project would not include the use of septic tanks or alternative on-site wastewater disposal systems; therefore, significance criterion (e) is not applicable and is not discussed further in this section.

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 ground shaking, seismically induced ground failure, or landslides. (Less than Significant)

The project site falls within the western slope of the central Sierra Nevada in Central California. The Sierra Nevada mountains consist primarily of plutonic rocks ranging from tonalite to granite. At lower elevations and slope transitions, local bedrock is covered in alluvial, landslide/rockfall, and glacial sediments.

The project site is in an area of low historical seismicity. The closest fault with documented activity during the Quaternary period (i.e., 2.6 million years Before Present to Present Day) is situated within the Melones Fault Zone of the Foothills Fault System, approximately 30 miles west of the project site. The closest fault with documented activity during the Holocene epoch (i.e., the last 11,700 years) is the Robinson Creek Fault approximately 35 miles to the northeast, and the closest historically active (i.e., within the last 200 years) fault is a segment of the Hartley Springs Fault Zone, which is approximately 54 miles southeast of the project site.[110] The Robinson Creek and Hartley Springs faults are on the eastern side of the Sierra Nevada and are classified under the Alquist-Priolo Earthquake Fault Zone Act.[111]

SURFACE FAULT RUPTURE

Considering the distance of the project site from the nearest active fault and Alquist-Priolo Earthquake Fault Zones, the project would not be exposed to surface fault rupture from known faults in the area. In addition, the project is being designed to account for existing geologic conditions based on geotechnical investigations and analyses performed for the project.[112] Thus, there would be *no impact* related to surface fault rupture.

GROUND SHAKING

The project site is rated by the California Geological Survey and United States Geological Survey with the lowest potential shaking hazard intensity (i.e., peak horizontal ground acceleration 0.15g).[113] Although the project site is not located in the vicinity of a fault, considering the seismic activity in the general region, the project is susceptible to earthquake-induced ground motions during the design life of the project. Proposed improvements related to the discharge channel would be constructed in stable bedrock, and the project is being designed to account for existing geologic conditions based on geotechnical investigations and analyses performed for the project.[114] Therefore, the project would have a *less than significant* impact related to strong seismic ground shaking.

[110] GEI Consultants, Inc., Draft Geotechnical Data Report, Cherry Valley Dam Spillway Short-Term Improvements Project, November 2024.
[111] California Geological Survey, Earthquake Zones of Required Investigation: Alquist-Priolo Fault Zones, 2022, *https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/*, accessed February 4, 2025.
[112] GEI Consultants, Inc., Draft 65% Design Report, Cherry Valley Dam Spillway Short-Term Improvements Project, February 2025.
[113] Branum, D., R. Chen, M. Petersen, and C. Wills, Earthquake Shaking Potential for California, California Geological Survey and United States Geological Survey, Map Sheet 48, Sacramento, CA, 2016.
[114] GEI Consultants, Inc., Draft 65% Design Report, Cherry Valley Dam Spillway Short-Term Improvements Project, February 2025.

Impact GE-2: The project would not expose people or structures to potential substantial adverse effects from landslide hazards or other unstable geologic conditions including lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant)

The discharge channel consists of a relatively straight and narrow unlined side channel and chute that transitions to a meandering, unlined channel. The discharge channel and chute are excavated in granitic bedrock. The discharge channel is trapezoidal in shape. The cuts for the discharge channel and chute are very steep and exceed 50 feet deep in places. At the downstream end of the chute the flow generally becomes unrestricted as it cascades down a 100-foot-high granitic slope referred to as the "Upper Cascade." Downstream of the Upper Cascade, the discharge channel flows southward along a gently sloping natural channel in the granitic landscape. Near its downstream end it bends about 70 degrees to the left (southeast) and the flows cascade down a 50-foot-high granitic slope (referred to as the "Lower Cascade") where they reach the alluvial-filled bottom and historical flood plain of Cherry Creek. At the bottom (downstream end) of the Lower Cascade, the flows are partially channelized through alluvial sediments to the creek.[115]

In the 1990s, a landslide occurred on the high fill slope forming the west side of the Upper Cascade, and the debris from this landslide was deposited in the discharge channel area below the Upper Cascade. On October 25, 2010, a spill of about 1,500 cubic feet per second occurred and reportedly caused additional landsliding of the right fill slope adjacent to the Upper Cascade. The debris from the landslides obstructed the discharge channel, causing flows to be diverted to the east and into a former natural drainage channel. This new "east channel" flows southeastward before discharging into Cherry Creek, with some flow spilling onto the old quarry bottom where the Cherry Power Tunnel Adit is located and spreading out across an adjacent low river terrace on its way to the creek. Presently, the flows at the bottom of the Upper Cascade remain directed into the east channel and away from the original south-flowing discharge channel.[116]

Rock falls and rock slides due to instability are a potential hazard along the steepest cut slopes of the Upper Cascade, downslope (i.e., to the east) of the slide area.[117] To evaluate the potential impact of excavations on the stability of the slide area, GEI Consultants performed slope stability analyses of the existing conditions and the conditions after excavations are completed but before the placement of the grouted riprap (i.e., the temporary loading condition). Both scenarios would be unaffected by the proposed construction work, which was determined to create a negligible difference between the existing condition and temporary loading condition.[118]

Additionally, while excavations performed for the project are not expected to affect the stability of the existing landslide, because construction personnel would be working below the steep, marginally stable slope, the project proposes that the existing slope be scaled to remove loose/unstable cobbles and boulders and then be covered with a rockfall protection system, such as steel wire mesh that is fastened with small anchors and pretensioned. As discussed in Section A, Project Description, it is envisioned that the rockfall protection system would be left in place after construction. In addition, a temporary rock berm may be installed within the upstream boundary of the project work area during construction. The temporary rock berm would reduce the potential for rocks that may roll down the slopes upstream of the site to enter the

[115] Ibid.
[116] Ibid.
[117] GEI Consultants, Inc., Alternatives Analysis Report (AAR) and Conceptual Engineering Report (CER) Cherry Valley Dam Spillway Short-Term Improvements Project, June 2024.
[118] GEI Consultants, Inc., Draft 95% Design Report, Cherry Valley Dam Spillway Short-term Improvement Project, May 2025.

project work area during construction. Grouted riprap would also be installed over the toe of the Upper Cascade landslide, at the north end of the project work area. This would reduce potential for toe scour, backcutting, and further sliding resulting from spillway flows of up to 2,000 cubic feet per second during project operation.

The proposed project includes clearing the debris from the bottom of the discharge channel and providing erosion protection to withstand the design flow as needed. The rehabilitated discharge channel would be designed and constructed in accordance with geotechnical recommendations, which include removing the landslide deposits down to native bedrock, constructing an armored fill embankment across the east channel, and installing mortared riprap along the sides of the discharge channel. These measures would prevent future flows from traveling down the east channel and are intended to provide sufficient erosion protection for future flows through the discharge channel. The project would restore the discharge channel's functionality to design capacity of 2,000 feet per second. Furthermore, because the discharge channel has been constructed in bedrock, it is not subject to hazards such as lateral spreading, subsidence, liquefaction, or collapse. Therefore, this impact would be *less than significant*.

Impact GE-3: The project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

As discussed in Section A, Project Description, one key objective of the project is to provide erosion protection, particularly along the spillway channel side slopes, the wet side of the proposed embankment, and in an area upstream and adjacent to the toe of the west bank of the Upper Cascade. The project's proposed erosion protection improvements include grouted riprap along the side slopes of the spillway. The project has been designed to provide adequate containment of the design flow of 2,000 cubic feet per second and meet slope stability requirements, including those designed to sustain flow resulting from erosive forces after construction. Engineering design reporting includes an erodibility assessment conducted to evaluate potential scour and erosion hazards associated with flows within the improved channel up to the spillway design flow of 2,000 cubic feet per second. Findings from the engineering design report include findings that erosion is not expected to have a significant impact on the discharge channel operability nor would the fill slope (e.g., Upper Haul Road on the right side of the Upper Cascade) be expected to significantly affect the performance of the design features.[119] For these reasons, project implementation would not be considered to result in adverse impact; rather, implementation is designed to reduce erosion and would provide a beneficial impact as compared with existing erosive soil conditions. The discussion below, therefore, focuses on the potential for soil erosion and loss of topsoil to result during project construction.

The potential exists for stormwater runoff and erosion to occur during construction activities, which would expose soils to erosive forces and could transport sediment into local drainages, thereby increasing turbidity, degrading water quality, and resulting in siltation to local waterways. Intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials could cause sedimentation of downstream surface water bodies. The construction process may also result in accidental release of other pollutants to surface waters.

[119] GEI Consultants, Inc., Draft 95% Design Report, Cherry Valley Dam Spillway Short-term Improvement Project, May 2025.

Use of staging areas would not require grading of surfaces, installation of new paved surfaces or resurfacing of any paved surfaces with concrete or asphalt, or changes from pervious to impervious surfaces. The project work area is composed of soil along with large cobbles and boulders underlain by impermeable bedrock. Embankment fill material would be moisture-conditioned, compacted, and then covered with riprap to prevent erosion. Erosion protection along the discharge channel would be achieved through the placement of bedding material covered by grouted riprap. The road improvement areas are primarily composed of existing compacted materials, and the project would include placement of aggregate base in several areas to prevent future road erosion. Where practicable, finished slopes adjacent to the grouted riprap slopes would be covered with mulch and biodegradable erosion control mats. It is anticipated that the downstream slope of the embankment and the excavated slopes above the riprap layer would be treated in this manner. Flatter disturbed slopes, such as on staging areas and other trafficked areas, would be stabilized by covering with soil and mulch.

Excess soil and rock from excavation that are not suitable for embankment fill could be a source of fill for future SFPUC projects. The surplus materials would be permanently stockpiled at staging area 2 and/or graded to blend with the existing slope in the staging area. Any surplus soil/rock materials stored at staging area 2 over the long term for future SFPUC use would be protected from erosion by berms, mulch, or similar erosion control measures**.**

During the single-shift construction scenario, all construction work would be performed over a 6-month period from May through October, when there would be minimal rainfall and therefore minimal potential for stormwater-related erosion. If the double-shift construction option is selected, all construction work would be performed over a 4-month period from September through December. Light to moderate rainfall events could occur during construction in November and December, and therefore marginally greater impacts from erosion due to stormwater runoff could occur under the double-shift construction scenario.

The California State Water Resources Control Board regulates stormwater discharges from construction sites. Projects that disturb one or more acres of soil are required to obtain coverage under the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction Stormwater General Permit, Order 2022-0057-DWQ). Because the project would disturb more than 1 acre of land, the project would require coverage under the Construction Stormwater General Permit. To comply with the Construction Stormwater General Permit, and as also required by SFPUC Standard Construction Measure #3 (Water Quality), the SFPUC or its contractor would prepare a stormwater pollution prevention plan and implement erosion and sedimentation controls tailored to each construction and staging area to reduce construction-related erosion at the project site. These control measures might include fiber rolls, straw wattles, straw bales, and timber check berms. These measures would minimize erosion and transport of sediment to Cherry Creek.

Because the SFPUC would comply with the Construction Stormwater General Permit and Standard Construction Measure #3 (Water Quality), including implementation of erosion control measures, to prevent water quality degradation, and any exposed soil on the project site slopes would be covered with mulch and biodegradable erosion control mats after construction, the project's impact related to substantial soil erosion would be *less than significant*.

Impact GE-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. (No Impact)

Based on laboratory results from site-specific soil testing, the project site soils are non-plastic,[120] meaning there is no potential for hazards from expansive soil. Thus, the project would have *no impact*.

Impact GE-5: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (No Impact)

PALEONTOLOGICAL RESOURCES

Paleontological resources are the fossilized evidence of past life found in the geologic record. Fossils are preserved in sedimentary rocks and may include bones, teeth, shells, leaves, and wood. Despite the abundance of these rocks, and the vast number of organisms that have lived through time, preservation of plant or animal remains as fossils can be a rare occurrence. Paleontological resources are considered nonrenewable resources because the organisms they represent no longer exist and, once destroyed, can never be replaced. Not all paleontological discoveries are considered scientifically important; therefore, several criteria exist for determining the scientific importance of fossils.

A paleontologically sensitive geologic formation is one that is rated high for potential paleontological productivity (i.e., the recorded abundance and types of fossil specimens, and the number of previously recorded fossil sites) and is known to have produced unique, scientifically important fossils. Exposures of a specific geologic formation at any given project site are most likely to yield fossil remains representing particular species or quantities similar to those previously recorded from that geologic formation in other locations. Therefore, the paleontological sensitivity determination of a rock formation is based primarily on the types and numbers of fossils that have been previously recorded from that formation.

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the Society of Vertebrate Paleontology[121] established four categories of sensitivity for paleontological resources: high, low, no, and undetermined. Areas where fossils have been previously found are considered to have a high sensitivity and a high potential to produce fossils. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity. Areas consisting of high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) are considered to have no sensitivity. Areas that have not had any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys are performed.

In general, the project site vicinity is characterized by artificial fills and recent Quaternary surficial deposits of variable composition and thickness overlying Mesozoic era granitic bedrock. Most of the area has been disturbed by grading associated with the construction of Cherry Valley Dam. This includes large and small

[120] GEI Consultants, Inc., Draft Geotechnical Data Report, Cherry Valley Dam Spillway Short-Term Improvements Project, November 2024.
[121] Society of Vertebrate Paleontology, Standard Procedures for the Assessment and Mitigation of Adverse Impacts of Paleontological Resources, 2010.

areas of cuts and fills, stockpiles, old construction haul roads and building pads, and numerous other access roads and bulldozer trails.[122]

Site-specific mapping of the geologic formations at the project site has been performed.[123] A paleontological resources records search performed at the University of California, Berkeley Museum of Paleontology on January 30, 2025, as well as a literature search, indicated there are no recorded vertebrate fossil localities or plant assemblages at the project site or in the vicinity.[124,125] The rock formations at the project site are not paleontologically sensitive. Therefore, project-related construction activities would have *no impact* on unique paleontological resources.

UNIQUE GEOLOGIC FEATURES

A unique geologic feature consists of a major natural element that stands out in the landscape, such as a large and scenic river, lake, gorge, major waterfall, volcanic cinder cone, lava field, or glacier. Cherry Lake is a man-made reservoir that was created by the construction of Cherry Valley Dam in 1956. The Cherry Creek canyon below Cherry Valley Dam (which includes the project site) is not particularly deep, the canyon is heavily forested, and rock outcroppings either are not present or do not stand out in the landscape; the canyon is typical of stream-cut valleys throughout the Sierra Nevada and therefore is not considered a unique geologic feature. Therefore, project construction and operation would have *no impact* on unique geological features.

Impact C-GE: The project, in combination with cumulative projects, would not result in substantial cumulative impacts related to geology and soils. (Less than Significant)

The geographic scope for potential cumulative impacts related to geology and soils is site-specific because the potential hazards related to seismicity, soil erosion, and unstable soils are based on local, site-specific geologic conditions. Geologic and soil conditions inherent to the project site would not contribute to geologic and soil conditions or related hazards of the cumulative projects, because the engineering and design requirements that would allow any particular project to proceed are site-specific, and such requirements are based on the different soils and geologic conditions found at each different project location throughout the earth's surface. Therefore, the project and the other projects considered in this cumulative analysis would not combine to create cumulative impacts, and a significant cumulative impact related to seismic, soils, and geologic hazards would not occur.

All of the projects considered in this cumulative analysis would involve ground-disturbing activities in the Cherry Creek and Eleanor Creek sub-watersheds, which are tributary to the larger Tuolumne River watershed, and all but one of these projects would be undertaken by SFPUC. Compliance with existing regulatory requirements and implementation of the SFPUC's Standard Construction Measures, as described under Impact GE-3, would prevent significant cumulative impacts on erosion and sediment transport. Therefore, the project, in combination with the projects considered in this cumulative analysis, would not result in significant cumulative impacts related to substantial soil erosion.

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[122] GEI Consultants, Inc., Draft Geotechnical Data Report, Cherry Valley Dam Spillway Short-Term Improvements Project, November 2024.
[123] Ibid. Plate 1, Geology of Cherry Valley Dam Spillway.
[124] University of California Museum of Paleontology, Paleontological Collections Database, https://ucmpdb.berkeley.edu/about.shtml, accessed January 30, 2025.
[125] Jefferson, G.T., A Catalogue of Late Quaternary Vertebrates from California—Part Two: Mammals, Technical Report No. 7. Natural History Museum of Los Angeles County, Los Angeles, CA, 1991.

Similar to the proposed project, the identified cumulative projects would occur in areas considered to have no paleontological resources sensitivity. Given the distance between these projects, they would not combine to impact the same unique geologic features (if present). Because the cumulative projects and the proposed project would not combine to impact sensitive paleontological resources or unique geologic features, a significant cumulative impact on these resources would not occur.

For these reasons, cumulative geology and soils impacts would be *less than significant*.

E.17 Hydrology and Water Quality

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:					
i) Result in substantial erosion or siltation on- or offsite;	☐	☐	☒	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☐	☒	☐
iii) 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; or	☐	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐	☐

HYDROLOGIC SETTING

Hydrology in the Project Area

The project site is in the Tuolumne River watershed, which encompasses approximately 2,000 square miles and includes portions of Yosemite National Park, Emigrant Wilderness, and Stanislaus National Forest. The Tuolumne River originates in Yosemite National Park and flows approximately 150 miles to its confluence with the San Joaquin River. The San Joaquin River flows north to the Sacramento-San Joaquin Delta, and then to the San Francisco Bay Estuary and the Pacific Ocean. The Tuolumne River headwaters are composed

of small streams that descend the slopes of Mount Lyell and Mount Dana in Yosemite National Park; these streams join to form the river itself at Tuolumne Meadows.

Cherry Creek is a tributary to the Tuolumne River. Flows in Cherry Creek are primarily controlled by water releases from Cherry Valley Dam, which impounds Cherry Lake. The project involves work on the Cherry Valley Dam's spillway discharge channel, which discharges directly to Cherry Creek (when the spillway is used) approximately 0.5 mile downstream (south) of the dam. The east channel, which resulted from debris flow during a landslide, now carries the spillway flows close to the Cherry Power Tunnel Adit entrance and into public dispersed camping areas downstream (i.e., farther east, in this case), where the water eventually discharges into Cherry Creek via overland flow approximately 0.25 mile upstream from the terminus of the original discharge channel.

Eleanor Creek, which flows south from Lake Eleanor to the east, joins Cherry Creek approximately 3.5 miles downstream (south) of the project site. The combined flows from Cherry and Eleanor creeks discharge into the Tuolumne River approximately 9 miles downstream (south) of the project site.

There are no existing stormwater drainage systems within or close to the project site.

FLOODING

Streamflow in Cherry Creek downstream of Cherry Lake is regulated by Cherry Valley Dam. Peak flows on Cherry Creek most commonly occur during large late winter rainstorms when melting snowpack conditions add to the total runoff. The Federal Emergency Management Agency Flood Insurance Rate Map for the area indicates that the project site and Cherry Creek below Cherry Valley Dam are classified as Zone D, which is an area of undetermined flood hazard.[126]

With regard to spillway flows, the SFPUC has determined that under existing conditions, flows as low as approximately 1,500 cubic feet per second to the east channel pose a potential flood hazard to the Cherry Power Tunnel Adit and public dispersed camping areas downstream of the dam.[127]

WATER QUALITY

Section 303(d) of the federal Clean Water Act requires each state to periodically prepare a list of all surface waters in the state for which beneficial uses of the water are impaired by pollutants. Beneficial uses for waters in the project site region are contained in the Central Valley Regional Water Quality Control Board's *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan).[128] The project site discharges into Cherry Creek, which in turn discharges to the Tuolumne River. Applying the Central Valley Regional Water Quality Control Board's "tributary rule," the beneficial uses of any specifically identified water body such as the Tuolumne River generally also apply to all its tributaries, including Cherry Creek. The Basin Plan lists the following beneficial uses for the Tuolumne River from the source to Don Pedro Reservoir: municipal and domestic water supply, agricultural irrigation and stock watering, industrial power generation,

[126] Federal Emergency Management Agency, Flood Map Service Center, Flood Insurance Rate Map 06109C0950C, 2009, *https://msc.fema.gov/portal/search?AddressQuery=cherry%20lake%2C%20tuolumne%20county%2C%20ca*, accessed January 2025.
[127] GEI Consultants, Alternatives Analysis Report (AAR) and Conceptual Engineering Report (CER), Cherry Valley Dam Spillway Short-Term Improvements Project, June 2024.
[128] Central Valley Regional Water Quality Control Board, Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 2019, *https://www.waterboards.ca.gov/rwqcb5/water_issues/basin_plans/sacsjr_201902.pdf*, accessed January 2025.

water contact and nonwater contact recreation, warm and cold freshwater habitat, and wildlife habitat.[129] The State of California adopts water quality standards to protect beneficial uses of waters of the state as required by section 303(d) of the federal Clean Water Act and the state Porter-Cologne Water Quality Control Act.

The State Water Resources Control Board identifies waters failing to meet standards for specific pollutants, which are then listed in accordance with Clean Water Act section 303(d). If it is determined that waters of the state are impaired for one or more constituents and the standards cannot be met through point source or nonpoint source controls (i.e., National Pollutant Discharge Elimination System permits or Waste Discharge Requirements), the Clean Water Act requires the establishment of total maximum daily loads. To identify candidate water bodies for total maximum daily load analysis, a list of water-quality-impaired segments is generated by the State Water Resources Control Board. These stream or river segments are impaired by the presence of pollutants and are more sensitive to disturbance because of this impairment. Cherry Creek and the Upper Tuolumne River (from Don Pedro Reservoir to Hetch Hetchy Reservoir) are not on the State Water Resources Control Board's section 303(d) list of impaired water bodies.[130]

Impact HY-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality, or result in substantial erosion or siltation from alteration of drainage channels. (Less than Significant)

CONSTRUCTION

The potential exists for stormwater runoff and erosion to occur on soil surfaces disturbed during construction activities like grading and excavation, which would expose soils to erosive forces and could transport sediment into local drainages, thereby increasing turbidity, degrading water quality, and resulting in siltation to local waterways. Intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, stormwater runoff containing these soil materials could flow into downstream surface waterbodies. Stockpiled construction materials and accidental releases of hazardous materials used during construction, such as fuels, could also be carried into waterbodies during rain events if not properly protected.

Use of staging areas would not require grading of surfaces, installation of new paved surfaces or resurfacing of any paved surfaces with concrete or asphalt, or changes from pervious to impervious surfaces. The project work area is composed of soil along with large cobbles and boulders underlain by impermeable bedrock. Embankment fill material would be moisture-conditioned, compacted, and then covered with riprap to prevent erosion. Erosion protection along the discharge channel would be achieved through the placement of bedding material covered by grouted riprap. Excess grout would be removed from the top surfaces of the exposed stones and hauled offsite for disposal at a permitted landfill facility. The road improvement areas are primarily composed of existing compacted materials, and the project would include placement of aggregate base in several areas to prevent future road erosion. Where practicable, finished slopes adjacent to the grouted riprap slopes would be covered with mulch and biodegradable erosion control mats. It is anticipated that the downstream slope of the embankment and the excavated slopes above the riprap layer

[129] Ibid.
[130] State Water Resources Control Board, 2024 Integrated Report, 2024, *https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html*, accessed January 22, 2025.

would be treated in this manner. Flatter disturbed slopes, such as on staging areas and other trafficked areas, would be stabilized by covering with soil and mulch.

When Cherry Lake is nearly full, a small amount of seepage flow (a few gallons per minute through weepholes in the spillway abutment and from the flashboards installed on the crest of the spillway) flows along the discharge channel and into the east channel. To provide a dry work area in the channel, this flow would be captured at the upstream (north) end of the project work area by placing a temporary diversion structure in the form of a small temporary sandbag cofferdam across the discharge channel. The water would be discharged by gravity through a hose or plastic pipe along the northeast side of the discharge channel and returned to the east channel east of the work area. Alternatively, the Contractor may collect this water and store it for construction use.

Construction wastewater would be minimal, primarily resulting from washing operations required for the temporary and portable concrete mixing plant. Construction wastewater would be collected, tested for hazardous substances, and disposed of offsite at an appropriate liquid waste facility in either Suisun City or Woodland, California. Water collection could be performed using a portable concrete washout tank or other appropriate liquid waste container. Additionally, any water pooled within the project work area, resulting from seepage through the slopes or from precipitation, may be pumped, tested and treated, as required, and if deemed clean may be used for dust control purposes and discharged to land, as allowed by permits that would be obtained by SFPUC. Similarly, any water resulting from seepage or precipitation that was deemed unsuitable for discharge to land would be disposed of offsite at an appropriate liquid waste facility in either Suisun City or Woodland, California.

Excess soil and rock from excavation that are not suitable for embankment fill could be a source of fill for future SFPUC projects. The surplus materials would be permanently stockpiled at staging area 2 and/or graded to blend with the existing slope in the staging area. Any surplus soil/rock materials stored at staging area 2 over the long term for future SFPUC use would be protected from erosion by berms, mulch, or similar erosion control measures.

During the single-shift construction scenario, all construction work would be performed over a 6-month period from May through October, when there would be minimal rainfall and therefore minimal potential for stormwater-related erosion. If the double-shift construction option is selected, all construction work would be performed over a 4-month period from September through December. Light to moderate rainfall events could occur during construction in November and December, and therefore marginally greater impacts from erosion due to stormwater runoff could occur under the double-shift construction scenario.

The California State Water Resources Control Board regulates stormwater discharges from construction sites. Projects that disturb one or more acres of soil are required to obtain coverage under the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction Stormwater General Permit, Order 2022-0057-DWQ). Because the project would disturb more than 1 acre of land, the project would require coverage under the Construction Stormwater General Permit. To comply with the Construction Stormwater General Permit and as also required by SFPUC Standard Construction Measure #3 (Water Quality), the SFPUC or its contractor would prepare a stormwater pollution prevention plan and implement erosion and sedimentation controls tailored to each construction and staging area to reduce construction-related erosion at the project site. These control measures might include fiber rolls, straw wattles, straw bales, and timber check berms. In addition, Standard Construction Measure #6 (Hazardous Materials) would require

implementation of measures intended to prevent the release of hazardous materials used during construction (such as storing materials pursuant to manufacturer recommendation, maintaining spill kits onsite, providing secondary containment, and containing any spills that occur to the extent safe and feasible, followed by collection and disposal in accordance with applicable laws). These measures would minimize discharges of sediment and other pollutants to the drainage channel and to Cherry Creek.

Because SFPUC would comply with the Construction Stormwater General Permit and implement Standard Construction Measures #3 (Water Quality) and #6 (Hazardous Materials) to prevent water quality degradation; project construction wastewater would be collected, tested, and appropriately disposed of offsite along with excess riprap grout material; pooled water resulting from seepage or precipitation would be collected, tested, appropriately discharged to land or disposed of offsite; and any exposed soil on surfaces disturbed by construction would be covered with mulch and biodegradable erosion control mats after construction, the project's construction impact related to violation of waste discharge requirements or other substantial degradation of surface or groundwater quality would be *less than significant*.

OPERATION

The rehabilitated discharge channel would be designed and constructed in accordance with geotechnical recommendations, which include removing the landslide deposits down to native bedrock, constructing an armored fill embankment across the east channel, and installing mortared (concrete) riprap along the sides of the discharge channel. These features are intended to prevent future flows from traveling down the east channel (which would reduce erosion and sedimentation presently occurring) and aim to provide sufficient erosion protection for future intermittent use of the discharge channel up to its design flow of 2,000 cubic feet per second. Therefore, project operation would not result in substantial erosion or siltation from alteration of drainage channels and would not violate waste discharge requirements or cause other substantial degradation of surface or groundwater quality, and there would be *no impact*.

Impact HY-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (No Impact)

The project site is not situated within the boundaries of a defined groundwater basin.[131] Project construction and operation would not include the use of groundwater supplies; all water would be obtained from surface water supplies. Water for construction use would be transported from Cherry Lake, the valve house, or an existing hydrant within Cherry Compound, using water trucks. Furthermore, the project would not interfere with groundwater recharge because no new impervious surfaces would be created, and all existing facilities and work areas that have been previously used for many years already consist of compacted surfaces or impermeable bedrock that inhibit recharge. Therefore, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin, and there would be *no impact*.

[131] Regional Water Quality Control Board Central Valley Region, Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region (Fifth Edition), Revised February 2019.

Impact HY-3: The project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite, or impede or redirect flood flows. (No Impact)

CONSTRUCTION

The project work area, staging areas, and road improvement areas consist of existing compacted materials and native bedrock, which are already composed of either low permeability or impermeable materials. Use of staging areas would not require grading of surfaces, installation of new paved surfaces or resurfacing of any paved surfaces with concrete or asphalt, or changes from pervious to impervious surfaces. Therefore, construction activities would not increase the rate or amount of surface runoff. A review of Federal Emergency Management Agency Flood Insurance Rate Maps indicates that the project site is not located within a defined flood hazard area. The project site is situated on a hillside approximately 300 feet above Cherry Creek and is protected from flood hazards associated with the creek. Therefore, project-related construction activities would not result in flooding or impede or redirect flood flows, and there would be *no impact.*

OPERATION

As described in detail in Section A, Project Description, the east channel (which resulted from a landslide) now carries spillway water flow eastward before discharging via overland flow into Cherry Creek, with some amount of flow spilling near the Cherry Power Tunnel Adit entrance, and then into public dispersed camping areas nearby. Based on observations during the 2010 spill, spillway flows as low as about 1,500 cubic feet per second from the east channel pose a potential flood hazard to the Cherry Power Tunnel Adit and public dispersed camping areas downstream of the dam.

Removing the landslide materials from the discharge channel and installing erosion protection along the sides of the discharge channel would restore the channel's functionality and allow conveyance of flows up to 2,000 feet per second and therefore would not increase surface runoff. As discussed under Impact GE-3, the project has been designed to provide adequate containment of the design flow and meet slope stability requirements, including those anticipated from surface runoff.[132] Installing the armored embankment would block off flows to the east channel, thereby redirecting flows away from the Cherry Power Tunnel Adit and camping areas and into the discharge channel, reducing the potential for damage from flooding created by the east channel in these areas. Project operation would not increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite and would reduce the potential for both on-site and off-site flood flows; therefore, there would be *no impact.*

Impact HY-4: The project would not 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. (No Impact)

The project site is situated in an undeveloped area that does not include or require stormwater drainage systems. Likewise, the undeveloped surrounding setting does not include facilities or land uses that involve pollutants, such as fertilizers, oil, or pesticides, that may otherwise be picked up by water flow, and the project does not include components that involve the addition of sources of pollutants. Removing the landslide materials from the discharge channel and installing erosion protection along the sides of it would restore the channel's functionality and allow conveyance of flows up to 2,000 feet per second, thereby

[132] GEI Consultants, Inc., Draft 95% Design Report, Cherry Valley Dam Spillway Short-term Improvement Project, May 2025.

containing and not increasing surface runoff. Installing the armored embankment would block off flows to the east channel, redirecting flows away from the Cherry Power Tunnel Adit and dispersed camping areas and into the discharge channel. Therefore, the project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and there would be *no impact.*

Impact HY-5: The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. (No Impact)

Because of the distance from the Pacific Ocean, the project site would not be at risk from tsunami hazards. The project site and Cherry Creek below Cherry Valley Dam are classified by the Federal Emergency Management Agency as Zone D, which is an area of undetermined flood hazard.[133] The project site consists of areas on a sloping hillside below Cherry Valley Dam and above Cherry Creek. The Cherry Valley Dam impoundment protects the project site from flooding related to streamflow and is engineered to comply with technical and administrative requirements for dam safety, which include critical performance mechanisms, such as overtopping of the embankment resulting from seiche.[134] Furthermore, as explained under Impact GE-1, the project site is in an area of low potential seismic shaking hazard, and therefore occurrence of a seiche in Cherry Lake is unlikely. The project site is in the Sierra Nevada approximately 143 miles from the Pacific Ocean and therefore is not subject to tsunami hazards. Therefore, the project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones, and there would be *no impact*.

Impact HY-6: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant)

For the reasons described in Impact HY-1, project-related construction would result in a *less-than-significant* impact, and project operation would result in *no impact*, to any water quality standards or otherwise substantially degrade surface or groundwater quality; therefore, project-related construction or operation would not conflict with or obstruct implementation of a water quality control plan.

The project site is not located in a defined groundwater basin and therefore is not within an area regulated by a sustainable groundwater management plan. For the reasons described in Impact HY-2, the project would result in *no impact* related to substantially decreasing groundwater supplies or interfering substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin; therefore, the project would not conflict with or obstruct implementation of a sustainable groundwater management plan.

Impact C-HY: The project, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality. (Less than Significant)

The geographic scope for potential cumulative impacts on hydrology and water quality would encompass the project site vicinity and water bodies that could be affected by the identified cumulative projects along with the proposed project. The project would have no impact on groundwater supplies and management,

[133] Federal Emergency Management Agency, Flood Map Service Center, Flood Insurance Rate Map 06109C0950C, 2009, *https://msc.fema.gov/portal/search?AddressQuery=cherry%20lake%2C%20tuolumne%20county%2C%20ca*, accessed January 2025.
[134] U.S. Army Corps of Engineers, General Design and Construction Considerations for Earth and Rock-Fill Dams Engineering Manual, July 30, 2004.

surface runoff volumes, and flooding hazards, and therefore would not contribute to cumulative impacts related to these parameters.

All of the projects considered in this cumulative impact analysis would involve ground-disturbing activities in the Tuolumne River watershed. Hydrologic and water quality effects of these projects could include transport or release of hazardous materials in downstream receiving waters. The primary cumulative effect of these projects would be to alter the water quality of Cherry Creek and/or Eleanor Creek (upstream tributaries to the Tuolumne River) through uncontrolled erosion and subsequent downstream siltation, and to increase the potential for the release of nonpoint source pollutants (i.e., motor oil, fuels, lubricants, and trash). However, all of the projects considered in this cumulative impact analysis would be subject to the same federal and state regulations protecting water quality as the proposed project, including the requirement to prepare a stormwater pollution prevention plan (for projects greater than 1 acre) and implement best management practices designed to prevent erosion and protect water quality from sediment transport and the release of nonpoint source pollutants. In addition, most of the cumulative projects are SFPUC projects, which would all implement best management practices to control sediment and erosion and pollutant discharge pursuant to the SFPUC's Standard Construction Measures. Compliance with existing regulatory requirements and implementation of the SFPUC's Standard Construction Measures would prevent significant cumulative impacts on hydrology and water quality. Therefore, the project, in combination with the projects considered in this cumulative analysis, would not result in significant cumulative impacts related to water quality standards, erosion from alteration of drainage channels, and implementation of a water quality control plan. This impact would be *less than significant*.

E.18 Hazards and Hazardous Materials

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☐	☒
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?	☐	☐	☐	☒	☐
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐	☐

The project site is not within one-quarter mile of an existing or proposed school, and the project site is not within 2 miles of a public airport or private airstrip. The closest school is Summerville Elementary School, which is approximately 33 miles west of the project site. The closest airport (Pine Mountain Lake Airport) is approximately 35 miles southwest of the project site. Therefore, significance criteria (c) and (e) are *not applicable* to the project and are not discussed further in this section.

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 Impact)

Project construction equipment would include generators, excavators, loaders, dozers/graders, compactors, woodchippers, riprap processing plant, concrete pump, and trucks for material delivery and hauling. Use of this equipment would require small amounts of hazardous materials, such as diesel fuel, lubricants, and solvents. Storage and use of hazardous materials during construction activities could result in the accidental release of small volumes of hazardous materials, which could affect soil and groundwater quality or surface water quality in nearby Cherry Creek if transported by stormwater runoff.

Hazardous materials handling, disposal, and transportation during all project construction phases would occur in accordance with applicable federal, state, and local regulations, which would reduce the risk of a release of hazardous materials into the environment. These include regulations addressing the storage of hazardous materials; criteria for identifying, packaging, and labeling hazardous materials and wastes; operation of vehicles transporting hazardous materials and waste; and the disposal of hazardous waste at permitted facilities. During construction, the SFPUC would implement its Standard Construction Measure #6 (Hazardous Materials) to reduce the risk of release of hazardous materials used during construction. Standard Construction Measure #6 requires measures to prevent the release of hazardous materials used during construction, such as properly storing materials in areas away from surface waters; maintaining spill kits onsite; and containing any spills that occur, followed by collection and disposal in accordance with applicable laws. Standard Construction Measure #6 further requires that any unidentified hazardous materials encountered during construction be characterized and appropriately treated, contained, or removed in accordance with any applicable local, state, and federal regulations to avoid any adverse exposure. In addition, as described under Impact HY-1, SFPUC would comply with the Construction Stormwater General Permit and implement Standard Construction Measures #3 (Water Quality), which would reduce the potential for an inadvertent discharge of hazardous materials to impact water quality.

No changes to operations are anticipated with the project, and there would be no increase in the potential for a hazardous materials discharge relative to existing conditions.

Therefore, with implementation of Standard Construction Measures #3 and #6 and conformance with applicable local, state, and federal regulations, the project's impact related to hazardous materials transport, use, and disposal or accidental release would be *less than significant*.

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)

As described under Impact HZ-1, hazardous materials used during project construction and operation would be managed in accordance with applicable laws and regulations and the SFPUC's Standard Construction Measures #3 (Water Quality) and #6 (Hazardous Materials). These include having spill containment and cleanup kits available onsite to minimize impacts should a spill or release occur. Therefore, with implementation of the SFPUC's Standard Construction Measures #3 and #6 and mandatory compliance with applicable local, state, and federal regulations regarding handling and incidental release of hazardous materials, the potential impact to the public or the environment from accidental release of hazardous materials would be *less than significant*.

Impact HZ-3: The project would not 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 not create a significant hazard to the public or the environment. (No Impact)

None of the project construction or staging areas is on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5, commonly referred to as the Cortese List. The Cortese List includes hazardous waste sites from the Department of Toxic Substances Control's EnviroStor database,[135] which identifies hazardous waste facilities, hazardous waste properties, hazardous waste disposal sites on public lands, leaking underground storage tanks, and other properties that may be contaminated with hazardous materials. In addition, the State Water Resources Control Board's GeoTracker database tracks regulatory data about leaking underground storage tank sites, fuel pipelines, and public drinking water supplies. The project construction and staging areas are not in any of the listed hazardous waste facilities or sites with known or suspected contamination.[136] No sites were listed in the EnviroStor or GeoTracker databases within 5 miles of the project site. Therefore, the project would have *no impact* related to potential hazards from hazardous materials sites listed pursuant to Government Code section 65962.5.

Impact HZ-4: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

During construction, the project could interfere with an adopted emergency response plan or emergency evacuation plan if it required the closure of roadways used for emergency services and/or evacuation routes. Cherry Lake Dam has the *Emergency Action Plan for Cherry Valley Dam (Revision 1.03.03, Revised July 29, 2024)*, as required by the California Division of Safety of Dams, that guides emergency response for dam breach. Emergency response and adherence with the emergency action plan is coordinated by the United States Forest Service and SFPUC security staff. Access to the project site is provided from either the south, via Highway 120 and Cherry Lake Road (Forest Route 1N07), or from the west, via California State Route 108 and Cottonwood Road (Forest Route 1N04), to Cherry Oil Road. From Cherry Oil Road, two access routes to the project site are identified, one from the southwest and one from the northeast (both referred to as Lower Haul Road). Construction at the project work area and use of staging areas would require temporary closure of segments of Upper Haul Road; Lower Haul Road; and Cherry Oil Road to the intersection of the Upper Haul Road and east of the existing SFPUC pipe gate,[137] to approximately 250 feet north of staging area 1b (see Figure 7 in Section A). Segments of roadway slated for temporary closure are not designated as evacuation routes. Furthermore, in the event that emergency response is required, project on-site personnel would coordinate with the United States Forest Service and emergency providers to ensure vehicular access. Therefore, temporary closures of access road segments during construction would not interfere with emergency services or evacuation routes.

Highway 120 and State Route 108 are major east-west and north-south, respectively, thoroughfares through Tuolumne County. During construction, these roads would be used by construction workers and as the haul

[135] California Department of Toxic Substances Control, Online EnviroStor Database, *https://www.envirostor.dtsc.ca.gov/ public/,* accessed January 23, 2025.
[136] California State Water Control Resource Board, Geotracker, 2024, *https://geotracker.waterboards.ca.gov/*, accessed Jan 23, 2025.
[137] The SFPUC pipe gate is used to temporarily limit public access to the discharge channel during normal Hetch Hetchy Water and Power operations and maintenance activities and during periods when areas of the spillway are flooded or considered unsafe for public access. Hetch Hetchy operations and maintenance staff lock the gate to restrict the public from crossing the discharge channel when water is flowing and/or the terrain in the area is flooded. Additionally, the gate is used to restrict public access when areas beyond the gate are needed for construction equipment laydown during routine operations and maintenance work.

route for material supplies and spoils disposal. The volume of construction vehicles would not significantly increase congestion on the roads, and the project would not require road closures along these possible key routes for evacuation. In accordance with SFPUC Standard Construction Measure #4 (Traffic), the project would implement traffic control measures, as appropriate, and coordination with local emergency responders, as necessary, to maintain emergency access during construction. Use of Highway 120 and State Route 108 during project operation would be similar to existing conditions. Therefore, the project would have a *less-than-significant impact* related to the implementation of an adopted emergency response plan or emergency evacuation plan for the project location.

Impact HZ-5: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. (Less than Significant)

The project site is not classified as a fire hazard severity zone but is adjacent to an area classified as a very high fire hazard severity zone in a State Responsibility Area.[138]

During project construction, a fire risk could be posed by construction vehicles and equipment, and by the temporary on-site storage and use of small quantities of diesel fuel, gasoline, and lubricants. Federal, state, and county regulations (e.g., Federal Wildland Fire Management Policy, title 14 of the California Code of Regulations administered by the California Department of Forestry and Fire Protection, the State Strategic Fire Plan, CalFire Wildland Hazards and Building Codes, and fire-safe ordinances in the Tuolumne County Ordinance Code) governing the use of construction equipment, particularly in fire-prone areas, are designed to minimize the risk of wildland fires. These regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has 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 for various types of work in fire-prone areas. Although the project area is not in a high fire hazard severity zone, adherence with general safety and best management practices outlined in these plans and regulations that are required for all construction work (regardless of zoning designation) would reduce the risk associated with wildland fires during project construction. In the event of a wildfire that requires evacuation of workers from the project site, all project personnel would comply with local evacuation orders related to wildfire threats.

The project would not involve new facilities or changes to the landscape that would exacerbate fire risk. Project operation would involve routine activities similar to those performed under existing conditions and would therefore not increase risks related to wildland fires. As a result, the project's impact on people or structures related to wildland fire would be *less than significant*.

Impact C-HZ: The project, in combination with cumulative projects, would not result in a significant cumulative impact related to hazards and hazardous materials. (Less than Significant)

The scope for potential cumulative impacts related to hazards and hazardous materials is the project site and immediate vicinity. With respect to cumulative impacts related to routine hazardous materials transport, hauling, and disposal and accidental releases of hazardous materials, projects on the cumulative list are also required to follow federal, state, and local regulations governing use of hazardous materials. The SFPUC is the sponsor of the project, as well as all but one of the cumulative projects; for each of these

[138] California Department of Forestry and Fire Protection, Fire Hazard Severity Zones in State Responsibility Area, Map effective April 1, 2024, *https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008*, accessed January 23, 2025

projects, the SFPUC would implement its Standard Construction Measures, which include actions to comply with regulations governing hazardous materials and to prevent and report accidental releases. The United States Forest Service is the project sponsor of the remaining cumulative project and has its own internal guidelines and procedures to avoid hazardous material-related impacts on its personnel, the public, and the environment. As a result, the project in combination with cumulative projects would not result in significant cumulative impacts related to routine hazardous materials transport, hauling, and disposal and accidental releases.

The project would not be located on a hazardous materials site, and therefore it would not combine with other cumulative projects to cause cumulative impacts related to exposure to hazardous waste from a site on the list of sites compiled pursuant to Government Code section 65962.5.

To the extent that construction of the proposed project and cumulative projects overlap, heavy duty trucks hauling materials and equipment for these projects and potentially traveling at slower speeds, could be traveling concurrently on key access routes, including Highway 120 and State Route 108, serving the project area. As noted above, the SFPUC is the sponsor of the proposed project, as well as all but one of the cumulative projects; for each of these projects, the SFPUC would implement its Standard Construction Measure #4 (Traffic), which requires traffic control measures, as appropriate, and coordination with local emergency responders as necessary to maintain emergency access during construction. Therefore, the project in combination with cumulative projects would not result in significant cumulative impacts on the implementation of an adopted emergency response plan or emergency evacuation plan.

The project site vicinity is within Stanislaus National Forest and is in a forest area prone to wildfire. Construction, operation, and maintenance activities of the project in combination with the cumulative projects could increase the potential for and incidence of wildland fires. Projects in the area would be subject to the federal, state, and county regulations (e.g., Federal Wildland Fire Management Policy, title 14 of the California Code of Regulations administered by the California Department of Forestry and Fire Protection, the State Strategic Fire Plan, and fire-safe ordinances in the Tuolumne County Ordinance Code). These regulations include minimum wildfire protection standards addressing emergency access, fuel load modification, setbacks and vegetation clearance, signage, and water supply. The cumulative projects involve rehabilitation or replacement of existing infrastructure and recreational facilities and would not involve new facilities or changes to the landscape that would exacerbate fire risk. Therefore, the project combined with cumulative projects in the area would not result in a significant cumulative wildland fire hazard impact.

For these reasons, cumulative hazardous materials impacts would be *less than significant*.

E.19 Mineral Resources

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
MINERAL RESOURCES. Would the project:					
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?	☐	☐	☐	☒	☐
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 plans?	☐	☐	☐	☒	☐

Impact MR-1: The project would not 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, or a locally important mineral resource recovery site. (No Impact)

With the exception of the 0.25-acre road improvement area located on United States Forest Service land (along Lower Haul Road), project activities would be located on lands within the Raker Act right-of-way. Mining that would entail excavation would not be permitted on these lands. The project site is not located in mineral resource areas of designated regional or statewide value (i.e., areas that have been classified by the California Geological Survey as MRZ-2). Furthermore, the Tuolumne County General Plan designates the project site for public use.[139] The Public designation identifies lands that are owned by public agencies, such as Stanislaus National Forest, and recognizes that this land is exempt from county land use designations, including those pertaining to mineral resources. Therefore, the project would have *no impact* on mineral resources.

Impact C-MR: The project, in combination with cumulative projects, would not result in a significant cumulative impact to mineral resources. (No Impact)

Because the project would have no mineral resources impacts, it would not contribute to any potential cumulative impact on mineral resources; therefore, there would be *no impact*.

[139] Tuolumne County, Tuolumne County Zoning & Land Use Lookup, 2024, *https://tuolumne.maps.arcgis.com/apps/webappviewer*, accessed January 15, 2025.

E.20 Energy

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
ENERGY. Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒	☐

Impact EN-1: The project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. (Less than Significant)

Nonrenewable energy resource consumption would occur during construction of the project. Construction-related activities would result in the temporary consumption of energy, including diesel fuel for off-road construction equipment and haul trucks and gasoline fuel for worker vehicle trips. As described in Section A.5.3, Construction Schedule, Equipment, and Workforce, the project would be constructed over a 4- to 6-month timeframe depending on the project construction scenario. However, construction activities under both options would result in a similar level of construction activity and therefore would result in a similar level of energy consumption.

Equipment and heavy-duty trucks used during project construction would be required to comply with all federal and state standards and regulations, including limiting idling to five minutes or less, which would minimize the wasteful use of fuel during idling.[140] Due to the contractor's incentive to reduce costs, project construction would not result in the wasteful use of fuel or energy resources. Furthermore, project construction would include on-site staging areas to minimize the need to transport equipment to and from the project site regularly and would reuse excavated material and rock from onsite to the extent feasible. Similarly, water required for construction would be supplied locally from Cherry Lake, thereby minimizing offsite truck trips and associated fuel consumption related to delivering water. In addition, the project would use conventional equipment and would not require any specialized machinery that is less energy-efficient than that used at a comparable construction site.

Because the project would rehabilitate a segment of the existing discharge channel, project implementation would not include changes to existing, normal operations and maintenance, nor would it include new or additional staff. With no changes to operations from existing conditions, the project would not result in wasteful, inefficient, or unnecessary consumption of fuel energy resources during operation.

For the above-discussed reasons, the project would have a *less-than-significant* impact on energy resources.

[140] California Code of Regulations, title 13, article 4.9, chapter 9, section 2449.

Impact EN-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (No Impact)

State plans for renewable energy and energy efficiency include California's Renewables Portfolio Standard Program (as revised by Senate Bill 100)[141] and the California Energy Efficiency Strategic Plan. The Renewables Portfolio Standard Program requires that utilities increase their renewable energy generation to 60 percent by 2030 and that all of the state's electricity come from carbon-free resources by 2045.[141] The plan, which was developed in 2008, outlines goals to improve the energy efficiency of new construction within all major sectors throughout the state.

As described under Impact EN-1 above, the project's construction activities would use conventional construction equipment and vehicles that would comply with federal and state standards for fuel efficiency. In addition, as described above, project activities would not result in an inefficient or wasteful consumption of energy resources. Construction and operations of the project would take place at the existing Cherry Valley Dam discharge channel, which is not in an area that would otherwise be slated for renewable energy production.

Following construction, operation at Cherry Valley Dam would remain similar to existing conditions. Energy consumption in the form of gasoline and diesel fuel for worker vehicles would continue to be required during regular operations and maintenance activities. There would be no change to operational power requirements associated with the dam.

Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and there would be *no impact*.

Impact C-EN: The project, in combination with cumulative projects, would not result in significant cumulative impacts related to the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruction of a state or local plan for renewable energy or energy efficiency. (Less than Significant)

The project would have a less-than-significant impact on energy resources during project construction or operation and would not conflict with any plans for renewable energy or energy efficiency. Additionally, statewide efforts are being made to increase power supply and to encourage energy conservation; the demand for energy from the project would be insubstantial in the context of the total demand in Tuolumne County and the state. Cumulative projects anticipated to overlap with the project would similarly involve temporary construction activities for infrastructure improvements such as repair and paving activities along Cherry Oil Road, inspection and potential replacement of electrical distribution equipment, and repair of the existing Lake Eleanor bridge. All projects would be required to promote energy efficiency to the extent possible in compliance with all applicable building codes as well as local and state energy efficiency regulations, ordinances, and plans, including California's Renewables Portfolio Standard Program and the California Energy Efficiency Strategic Plan. Therefore, the project, combined with cumulative projects in the vicinity, would not result in a significant cumulative impact on energy resources or conflict with state or local plans for renewable energy or energy efficiency. The cumulative impact would be *less than significant*.

[141] Senate Bill 100, California Renewables Portfolio Standard Program; emission of greenhouse gases, Chapter 312, an act to amend Sections 399.11, 399.15, and 399.30 of, and to add Section 454.53 to, the Public Utilities Code, relating to energy, *https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100*, accessed January 28, 2025.

E.21 Agriculture and Forestry Resources

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
AGRICULTURE AND FORESTRY RESOURCES. 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 Department of Conversation 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. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐
e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	☐	☐	☐	☒	☐

Impact AG-1: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (No Impact)

The project would be within the boundaries of Stanislaus National Forest and the City and County of San Francisco's right-of-way. The California Department of Conservation Farmland Mapping and Monitoring Program does not have maps of important farmlands prepared for the area in which the project site is located.[142] However, farmland classifications for Tuolumne County are made available via the Web Soil Survey online database provided by the United States Department of Agriculture National Resources

[142] California Department of Conservation, DLRP Important Farmland Index, 2020, *https://maps.conservation.ca.gov/dlrp/ciff/*, accessed January 23, 2025.

Conservation Service. According to this database, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the project site vicinity.[143] Therefore, the project would have *no impact* related to the conversion of important farmlands to non-agricultural use.

Impact AG-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. (No Impact)

The project site, including the construction staging and work areas, lies within the boundaries of Stanislaus National Forest and is zoned P (Public) by Tuolumne County.[144] The project site is not used for farming or agricultural activities. Additionally, no portion of the project site is under a Williamson Act contract.[145] For these reasons, the project would not conflict with existing agricultural use zoning or a Williamson Act contract, and there would be *no impact*.

Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). (No Impact)

As noted under Impact AG-2, the project site is zoned P (Public). The project would not change the use of the project site and would not conflict with existing zoning for, or cause rezoning of, forest land or timberland, or timberland zoned for timberland production, and there would be *no impact*.

Impact AG-4: The project would not result in the loss of forest land or conversion of forest land to non-forest use. (Less than Significant)

Portions of the construction staging and work areas contain various vegetation communities, including forest. The forest type surrounding the project site is ponderosa pine-incense cedar-Douglas fir forest and woodland. With the exception of one access road improvement on United States Forest Service land at the intersection of Lower Haul Road and Upper Haul Road, project activities would occur within the Raker Act right-of way, which is not managed or planned to be managed as productive forest lands. However, the vegetation communities within the vicinity of the project site are considered forest lands due to their vegetation composition, and therefore conversion of any portion of these areas to non-forest use could represent an impact on forest resources.

Project implementation would require the removal of up to approximately 315 trees within the project work area, the proposed construction vehicle turnaround at the western boundary of the project work area, and the proposed widening area at the intersection of Lower Haul Road and Upper Haul Road. Trees slated for removal are mainly ponderosa pine (204 trees) and incense cedar (104 trees) but also include canyon live oak (two trees), interior live oak (two trees), red willow (two trees), and black oak (one tree). Some trees adjacent to the project work area and/or road improvement areas, and in the staging areas, may require pruning to improve sight distance and/or allow equipment access. Equipment access to staging areas may result in minor

[143] United States Department of Agriculture National Resources Conservation Service, Web Soil Survey, 2025, *https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx*, accessed January 23, 2025.
[144] Tuolumne County Zoning and Land use lookup, *https://www.arcgis.com/apps/webappviewer/index.html?id=3e926c5038e74b729ed2e78dcfe490d9&extent=-13417821.0729%2C4556761.9455%2C-13358391.2834%2C4591196.8267%2C102100*, accessed January 23, 2025.
[145] California Department of Conservation, California Williamson Act Enrollment Finder, 2023, *https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html*, accessed January 23, 2025.

vegetation removal. Removed vegetation would be chipped and used for temporary erosion protection measures or as part of site restoration. Upon completion of construction, replanting of trees may occur at nearby offsite areas, if necessary, as required by conditions of permitting agencies. In the context of the available forest lands available within the 898,000-acre Stanislaus National Forest, tree removal required for project construction would not represent a significant loss of forest resources. Furthermore, the project would restore the original alignment of the discharge channel and would not result in the conversion of forest land to non-forest use. All conifer trees identified for removal by the project are ones that are assumed to have regenerated after initial clearing for construction of the dam and spillway (as indicated by their size [e.g., diameter breast height] and location[146]).

No additional loss of trees would occur during project operations. Therefore, the project would result in a *less-than-significant* impact related to the loss of forest land or conversion of forest to non-forest use.

Impact AG-5: The project would not involve other changes in the existing environment that, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)

As discussed under Impact AG-2, the project site is not used for farming or agriculture. Forest land impacts are addressed under Impact AG-4. Following project construction, operation and maintenance activities would be similar to existing activities. Therefore, the project would have *no impact* involving other changes to the existing environment that could result in the conversion of farmland to non-agricultural use or forest land to non-forest use.

Impact C-AG: The project, in combination with cumulative projects, would not result in a significant cumulative impact related to forest lands and agriculture. (Less than Significant)

As discussed under Impacts AG-1, AG-2, and AG-5, the project would have no impact on agricultural lands. Therefore, the project would not combine with other cumulative projects to result in cumulative impacts on agricultural lands. Some projects from the cumulative list in Table 6, such as the electrical infrastructure improvements under the Cherry Compound Power System Upgrades and Public Resources Code Section 4292 Pole Equipment Replacement Projects, may require some incidental tree removal that may result in a temporal loss of forest cover. However, these cumulative impacts, when combined with the limited loss of forest vegetation from the project, would not be significant in the context of the greater available forested areas within the project's geographic scope. Therefore, the cumulative impact on forest lands from the project, in combination with reasonably foreseeable future projects, would be *less than significant.*

[146] GEI, Cherry Valley Spillway Short-term Improvements Project, Tree Inventory Data, May 2025.

E.22 Wildfire

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plans?	☐	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildlife risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐	☐
d) Expose people or structure to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐	☐

Impact WF-1: The project would not impair an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

For the reasons described under Impact HZ-4 in Section E.18, Hazards and Hazardous Materials, the project's impact on emergency response or evacuation in the event of a wildfire would be *less than significant*.

Impact WF-2: The project would not, due to slope, prevailing winds, or other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (Less than Significant)

The project site is within the Stanislaus National Forest, a Federal Responsibility Area for wildfire management. The project site is not classified a fire severity zone but is adjacent to an area classified as a very high fire hazard severity zone in a State Responsibility Area. The United States Forest Service, Tuolumne County, and the California Department of Forestry and Fire Protection would provide wildfire response within the project site.[147] Stanislaus National Forest, including the project site, is characterized by dense forest vegetation defined as high hazard fuel. The California Department of Forestry and Fire Protection developed a "Fire Threat" measure of fuel conditions and fire potential in the ecosystem. Fire Threat is used

[147] Tuolumne County, Multi-Jurisdictional Hazard Mitigation Plan for Tuolumne County, 2018 Update.

to assess the likelihood of impacts to occur and/or of increased severity for the higher threat classes. Fire Threat measures range from (1) "Low" to (5) "Extreme." Fire Threat at the project site is classified as (3) "High" to (4) "Very High."[148]

During project construction, wildfire risk could increase due to the use of construction vehicles and equipment that may produce a spark, flame, or fire and due to the temporary on-site storage and use of small quantities of diesel fuel, gasoline, and lubricants. The project would include excavation of landslide debris and material processing; embankment construction; erosion protection; minor road improvements; and site restoration. The project does not propose any new development or new permanent occupation of the project site. The project would not introduce new structures and would not result in any ground modification that would substantially alter the landscape or wind movement. Project activities would also include clearing of vegetation and tree removal in project work and road improvement areas that would reduce fire fuels. In addition, compliance with applicable regulations (e.g., the Federal Wildland Fire Management Policy, title 14 of the California Code of Regulations administered by California Department of Forestry and Fire Protection,[149] the State Strategic Fire Plan, the Stanislaus National Forest Plan Direction,[150] and fire-safe ordinances in the Tuolumne County Ordinance Code) as discussed in Impact HZ-5 would minimize the risk of wildland fires from construction activity. Therefore, the project's impact associated with wildfire risk or the spread of wildfire would be *less than significant*.

Impact WF-3: The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (Less than Significant)

Project improvements to the existing Lower Haul Road would include localized widening and placement of aggregate base to improve access for construction traffic. The project improvements to the discharge channel would restore its original alignment through removal of landslide debris and the installation of an armored embankment. Project activities would also include clearing of vegetation and tree removal in project work and road improvement areas that would reduce fire fuels. The project would not introduce new structures or changes in the landscape in the project site vicinity that would exacerbate wildfire risks. In addition, the project would not require the installation of new roads, fuel breaks, or utilities that would exacerbate the fire risk. Therefore, the project impact related to exacerbation of fire risk as a result of the installation or maintenance of infrastructure would be *less than significant*.

Impact WF-4: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (Less than Significant)

The project would not introduce new structures and would restore the alignment of the discharge channel to its original north-south orientation. The project would slightly alter the site topography by removing former landslide debris and material, constructing an embankment, and installing erosion protection

[148] California Department of Forestry and Fire Protection, Fire Threat.
[149] California Building Standards Commission, California Fire Code, California Code of Regulations, Title 24, Part 9, January 2016, *http://www.citymb.info/home/showdocument?id=28089*, accessed July 8, 2024.
[150] United States Forest Service, Stanislaus National Forest, Forest Plan Direction, March 2017, *https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd535378.pdf*, accessed February 6, 2025.

measures to prevent future landslides; these improvements would reduce the potential for flooding at the Cherry Power Tunnel Adit entrance and public, dispersed camping areas downstream that occurs under existing conditions via the east channel. The project work area, staging areas, and road improvement areas consist of existing compacted materials and native bedrock, which are already composed of either low permeability or impermeable materials, and the project would not increase the rate or amount of surface runoff. Construction activities would also not increase the rate or amount of surface runoff. The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes; therefore, this impact would be *less than significant*.

Impact C-WF: The project, in combination with cumulative projects, would not result in cumulative impacts associated with wildfires. (Less than Significant)

The geographic scope for potential cumulative impacts associated with wildfires is the project site and immediate vicinity. As described under Impact C-HZ in Section E.18, Hazards and Hazardous Materials, cumulative impacts related to the implementation of an adopted emergency response plan or emergency evacuation plan would not be significant.

As stated above under Impacts WF-2, WF-3, and WF-4, the project would not introduce new structures, utilities, or other changes to the project area that would exacerbate wildfire risk. The cumulative projects involve rehabilitation or replacement of existing infrastructure and recreational facilities and would not involve new facilities, associated infrastructure, or changes to the landscape that would exacerbate fire risk or expose people or structures to downslope flooding or landslides. In addition, each of the cumulative projects would be individually required to comply with all applicable federal, state, and local regulations to adequately mitigate impacts related to wildfire. These regulations include minimum wildfire protection standards addressing emergency access, fuel load modification, setbacks and vegetation clearance, signage, and water supply. Therefore, the project in combination with cumulative projects would not result in significant cumulative impacts related to wildfire. This impact would be *less than significant.*

E.23 Mandatory Findings of Significance

Topics:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Not Applicable
MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:					
a) Have the potential to substantially 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, substantially 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?	☐	☒	☐	☐	☐
b) Have impacts that are 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.)	☐	☐	☒	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☐

a) The project would not substantially 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, substantially 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. As discussed in Section E.15, Biological Resources, the project could have an adverse effect on special-status species that have the potential to occur in the project site or project area, including plants, raptors, special-status bat species, and nesting birds. These impacts would be reduced to a less-than-significant level with the implementation of the following mitigation measures: **Mitigation Measure M-BI-1a, Worker Environmental Awareness Training; Mitigation Measure M-BI-1b, Raptors and Migratory Bird Nesting Survey and Protection Measures; and Mitigation Measure M-BI-1c, Avoidance and Minimization Measures for Maternity Roosts and Special-Status Bats Day Roosts.**

b) For the reasons described in Sections E.1 through E.22, the project would either not contribute or would not contribute considerably to all cumulative impacts on the environment with implementation of mitigation measures to address potentially significant project-level impacts.

c) No potentially significant impacts were identified for the following environmental topics that could affect human beings: land use and planning, aesthetics, population and housing, transportation and circulation, noise, air quality, GHG emissions, wind, shadow, recreation, utilities and service systems, public services, geology and soils, hydrology and water quality, hazards and hazardous materials, energy, and wildfire. Therefore, the project would not cause substantial adverse effects on human beings, either directly or indirectly, and the impact would be less than significant.

F. MITIGATION MEASURES

The following mitigation measures have been adopted by the project sponsor and are necessary to avoid potential significant impacts of the project.

F.1 Biological Resources

Mitigation Measure M-BI-1a: Worker Environmental Awareness Training

A project-specific, language-appropriate worker environmental awareness program training shall be developed by a qualified biologist for the project and attended by all construction personnel prior to beginning work onsite (i.e., training materials shall be made available in a language adequately understood by the participants). As part of the training, brochures shall be given to provide reference material to contractors. The training shall be provided by the qualified biologist or by designated SFPUC staff trained by the biologist to provide this training, using the materials developed by the qualified biologist, and may be administered via a video-recorded training produced specifically for the project by a qualified biologist. The worker environmental awareness program training shall at a minimum 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 and wildlife species with the potential to occur at or in the vicinity of the project site, avoidance measures, and a protocol for reporting the discovery, harm, injury, or mortality of any such species, including a detailed communication chain
- Preconstruction surveys and biological monitoring requirements associated with certain work activities (e.g., vegetation removal, tree trimming, etc.)
- Known sensitive resource areas in the project vicinity that are delineated on the project plans or on site to be avoided and/or protected, including biologist-established buffers for nesting birds (if applicable based on presence), as well as restriction of work and staging to the approved project site
- Known noxious or invasive weeds at or near the project site, and best management practices for minimizing their spread
- Best management practices and their location at the project site for erosion control and/or species exclusion

Mitigation Measure M-BI-1b: Raptors and Migratory Bird Nesting Survey and Protection Measures

To the extent feasible, tree removal and trimming shall be conducted from September 1 to February 28, which is outside of nesting season. To protect raptors and nesting migratory birds, the SFPUC shall retain a qualified wildlife biologist to conduct pre-construction surveys for nesting raptors and migratory birds prior to the commencement of construction activities that occur between March 1 and August 31 of a given year. The surveys shall be conducted a maximum of 14 days prior to the start of construction during the nesting season. The project site (inclusive of the project work area, staging

areas, and road improvement areas) plus a 660-foot buffer surrounding the project site shall be surveyed for nesting bald eagles; the project site plus a 300-foot buffer shall be surveyed for nesting raptors (excluding bald eagles); and the project site plus a 50-foot buffer shall be surveyed for other nesting birds, such as passerines, protected under the Migratory Bird Treaty Act. For the California spotted owl, surveys shall be undertaken in areas where the protected activity centers or home range core areas overlap with the 0.25-mile buffer around the project site. A nest is defined to be active for raptors if there is a pair of birds displaying reproductive behavior (i.e., courting) at the nest, and/or if the nest contains eggs or chicks. For other migratory birds and passerines, a nest is defined as active if it contains eggs or chicks. If no active nests are detected, no additional action would be required. Nesting deterrents, such as mylar foil or noise deterrents, may be implemented prior to nesting season to deter birds from nesting in the project site.

If active nests are found during the pre-construction nesting survey, the wildlife biologist shall evaluate whether the schedule of construction activities could affect the active nest, and the following measures shall be implemented based on the biologist's 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 that there is no adverse effect on nest success and may revise the determination at any time during the nesting season.

- If construction (including tree removals or trimming) may affect the active nest, the biologist shall establish a no-disturbance buffer, taking into account the sensitivity of the species involved; visibility (i.e., line of sight) between the nest and construction; and the level of project and ambient activity (i.e., if the nest is adjacent to a road). All project work shall halt (including tree removals or trimming) within the buffer until a qualified biologist determines that the nest is no longer in use.

- Any work that the SFPUC and their contractor determine must occur within established no-disturbance buffers around active nests and is deemed appropriate by the qualified biologist (e.g., vegetation or tree removal, grading, work with hand tools, etc.) shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest, work shall halt until the nestlings fledge.

- No-disturbance buffers for passerines shall be 25 feet or greater, and 300 feet or greater for most raptors (except bald eagle); no-disturbance buffers for bald eagle nest shall be a minimum of 660 feet.

- For bird species that are federally and/or state-listed special-status species (i.e., threatened, endangered, fully protected, or Species of Special Concern), an SFPUC representative, supported by the wildlife biologist, shall consult with the United States Forest Service, U.S. Fish and Wildlife Service, and/or California Department of Fish and Wildlife (as appropriate) regarding appropriate nest buffers.

- Removing inactive passerine nests may occur at any time. Inactive raptor nests shall not be removed unless a qualified biologist or SFPUC Representative has first consulted with the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife.

- Most birds that begin nesting within a survey buffer during construction and following the pre-construction survey are assumed to be habituated to construction-related or similar noise and disturbance levels, and exclusion zones around nests may be reduced or eliminated in these cases as determined by the qualified biologist. However, this provision does not apply to bird species that are federally and/or state-listed special-status species (i.e., threatened, endangered, fully protected, or Species of Special Concern). Protective measures listed above shall continue to be implemented for these species if they begin nesting within a survey buffer during construction and following the pre-construction survey.

Mitigation Measure M-BI-1c: Avoidance and Minimization Measures for Maternity Roosts and Special-Status Bats Day Roosts

A survey for roosting bats and potential roost habitat shall be conducted by a qualified biologist prior to the commencement of construction activities that have the potential to disturb special-status bat day roosts or maternity roosts of any bat species through elevated noise levels or removal of trees, as determined by the qualified bat biologist. Areas within 25 feet of the project work area, staging areas, and road improvement areas shall be assessed to determine whether they provide high potential for roost sites. If a visual survey is not adequate to determine the presence or absence of bats (such as in tree cavities), acoustic equipment or other methods recommended by the qualified biologist shall be used to determine potential occupancy and species composition. If no active roosts are found, then no further action is warranted. If special-status bat day roosts or maternity roosts of any bat species are found, the following measures shall be implemented:

- Trees shall be trimmed or removed or bat exclusion devices shall be installed when bats are active and able to relocate of their own volition, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of the bat maternity roosting season (approximately April 15 to August 15) if a maternity roost is present; and outside the months of winter torpor (approximately October 15 to February 28, or as determined by a qualified biologist experienced in the identification of special-status bats).

- Maternity Roosts: If a maternity roost of any size supporting any bat species (special-status and non-special-status) is detected during surveys, an avoidance buffer around the active roost, as determined by a qualified bat biologist, shall be maintained from April 1 until the young are flying, typically after August 31.

- Special-Status Bat Day Roosts: If a day roost of any special-status bat is found in a tree planned for removal, the bats shall be safely evicted under the direction of a qualified bat biologist. Eviction shall occur as a multi-step process to make suitable habitat less desirable for special-status bats by (1) removing surrounding trees that are determined to not contain suitable roosts (if surrounding trees are identified for removal); (2) limbing trees determined to potentially contain roosting sites; and (3) removing potential roosting trees.

  In some circumstances, the qualified bat biologist may allow roosting bats to continue using a roost while construction is occurring near the roost site. For example, if it is determined that the risks to bats from eviction (e.g., increased predation or exposure, or competition for roost sites) are greater than the risk of roost abandonment (resulting from construction), then the bats shall not be evicted.

G. 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.

Joy Navarrete for

Environmental Review Officer

DATE 9/24/2025

H. INITIAL STUDY PREPARERS

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Environmental Consultants

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  - Allison Brock
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  - Chris Kaiser
  - Suzanne McFerran
  - Jed McLaughlin
  - Nikita Subramanian

APPENDIX A

SFPUC STANDARD CONSTRUCTION MEASURES

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

OFFICE OF THE GENERAL MANAGER
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MEMORANDUM

TO: Michael Carlin, Juliet Ellis, Barbara Hale, Kathryn How, Tommy Moala, Steven Ritchie, Eric Sandler

DATE: July1, 2015

FROM: Harlan L. Kelly, Jr. General Manager

SUBJECT: SFPUC Standard Construction Measures

In 2006, the SFPUC General Manager (GM) directed SFPUC staff to incorporate the Standard Construction Measures (Measures) in all SFPUC projects via memorandum on August 16, 2006. The directive was updated and clarified on December 6, 2006. The GM updated and re-issued the Measures on February 7, 2007. The purpose then, as it is now, was for the SFPUC to adopt environmentally responsible practices to apply to all SFPUC projects.

This directive further updates the Measures. In particular, the protocol for cultural resources is included in detail in order to fully incorporate the San Francisco Planning Department's recently adopted approach to this resource area so that all SFPUC are constructed consistently with this protocol. The updated cultural resources protocols are set forth in full and are attached to this memorandum.

In addition to complying with all applicable local, State, and federal laws and regulations, these Measures are to be followed as a standard practice in the execution of every SFPUC project. While some of the Measures may not apply to a project, it is important to address each of the Measures either by implementing the Measure as described, explaining why it is not applicable to the particular project, or undertaking further investigation and developing a more detailed work plan to address the resource as provided in the resource-specific Measures. Some of the Measures are very broad and will be tailored to suit each project site and surrounding circumstances.

For projects that undergo full CEQA review (Mitigated Negative Declarations or Environmental Impact Reports) a n d / or receive resource agency permits (e.g., US Army Corps of Engineers, California Department of Fish and Wildlife, etc.), these Measures may be superseded and/or amplified with more detailed, project specific

Edwin M. Lee
Mayor
Ann Moller Caen
President
Francesca Vietor
Vice President
Vince Courtney
Commissioner
Anson Moran
Commissioner
Ike Kwon
Commissioner
Harlan L. Kelly, Jr.
General Manager

mitigation measures or conditions stipulated in the project CEQA document and/or permits.

The Measures can be accessed at the following link:

S:\SFPUC Standard Construction Measures

The responsibility for implementation of the Standard Construction Measures rests with each Project Manager in Infrastructure and the SFPUC Enterprises. If you have any questions please contact Irina Torrey, Manager, Bureau of Environmental Management at 415-554-3232.

Please begin implementing these Measures immediately. Thank you for your cooperation.

SFPUC Standard Construction Measures

1. SEISMIC AND GEOTECHNICAL STUDIES: All projects will prepare a characterization of the soil types and potential for liquefaction, subsidence, landslide, fault displacement, and other geological hazards at the project site and will be engineered and designed as necessary to minimize risks to safety and reliability due to such hazards. As necessary, geotechnical investigations will be performed.

2. AIR QUALITY: All projects within San Francisco City (the City) limits will comply with the Construction Dust Control Ordinance. All projects outside the City will comply with applicable local and State dust control regulations. All projects within City limits will comply with the Clean Construction Ordinance. Projects outside City limits will comply with San Francisco or other applicable thresholds for health risks. All projects, both within and outside of City limits, will comply with either San Francisco or other applicable thresholds for construction criteria air pollutants.

To meet air quality thresholds, all projects (as necessary) will implement air quality controls to be tailored to the project, such as using high tier engines, Verified Diesel Emissions Control Strategies (VDECS) such as diesel particulate filters, customized construction schedules and procedures, and low emissions fuel.

3. WATER QUALITY: All projects will implement erosion and sedimentation controls to be tailored to the project site such as, fiber rolls and/or gravel bags around stormdrain inlets, installation of silt fences, and other such measures sufficient to prevent discharges of sediment and other pollutants to storm drains and all surface waterways, such as San Francisco Bay, the Pacific Ocean, water supply reservoirs, wetlands, swales, and streams. As required based on project location and size, a Stormwater Control Plan (in most areas of San Francisco) or a Stormwater Pollution Prevention Plan (SWPPP) (outside of San Francisco and in certain areas of San Francisco) will be prepared. If uncontaminated groundwater is encountered during excavation activities, it will be discharged in compliance with applicable water quality standards and discharge permit requirements.

4. TRAFFIC: All projects will implement traffic control measures sufficient to maintain traffic and pedestrian circulation on streets affected by construction of the project. Traffic control measures may include, but not be limited to, flaggers and/or construction warning signage of work ahead; scheduling truck trips during non-peak hours to the extent feasible; maintaining access to driveways, private roads, and off-street commercial loading facilities by using steel trench plates or other such method; and coordination with local emergency responders to maintain emergency access. For projects in San Francisco, the measures will also, at a minimum, be consistent with the requirements of San Francisco Municipal Transportation Agency (SFMTA)'s Blue Book. Any temporary rerouting of transit vehicles or relocation of transit facilities would be coordinated with the applicable transit agency, such as SFMTA Muni Operations in San Francisco. All Projects will obtain encroachment permits from the applicable jurisdiction for work in public roadways.

5. NOISE: All projects will comply with local noise ordinances regulating construction noise. The SFPUC shall undertake measures to minimize noise disruption to nearby neighbors and sensitive receptors during construction. These efforts could include using best available noise control technologies on equipment (i.e., mufflers, ducts, and acoustically attenuating shields),

locating stationary noise sources (i.e., pumps and generators) away from sensitive receptors, erecting temporary noise barriers, and other such measures.

6. HAZARDOUS MATERIALS: Where there is reason to believe that site soil or groundwater that will be disturbed may contain hazardous materials, the SFPUC shall undertake an assessment of the site in accordance with any applicable local requirements (e.g., Maher Ordinance) or using reasonable commercial standards (e.g., Phase I and Phase II assessments, as needed). If hazardous materials will be disturbed, the SFPUC shall prepare a plan and implement the plan for treating, containing or removing the hazardous materials in accordance with any applicable local, State and federal regulations so as to avoid any adverse exposure to the material during and after construction. In addition, any unidentified hazardous materials encountered during construction likewise will be characterized and appropriately treated, contained or removed to avoid any adverse exposure. Measures will also be implemented to prevent the release of hazardous materials used during construction, such as storing them pursuant to manufacturer recommendation, maintaining spill kits onsite, and containing any spills that occur to the extent safe and feasible followed by collection and disposal in accordance with applicable laws. SFPUC will report spills of reportable quantity to applicable agencies (e.g., the Governor's Office of Emergency Services).

7. BIOLOGICAL RESOURCES: All project sites and the immediately surrounding area will be screened to determine whether biological resources may be affected by construction. A qualified biologist will also carry out a survey of the project site, as appropriate, to note the general resources and identify whether habitat for special-status species and/or migratory birds, are present. In the event further investigation is necessary, the SFPUC will comply with all local, State, and federal requirements for surveys, analysis, and protection of biological resources (e.g., Migratory Bird Treaty Act, federal and State Endangered Species Acts, etc.). If necessary, measures will be implemented to protect biological resources, such as installing wildlife exclusion fencing, establishing work buffer zones, installing bird deterrents, monitoring by a qualified biologist, and other such measures. If tree removal is required, the SFPUC would comply with any applicable tree protection ordinance.

8. VISUAL AND AESTHETIC CONSIDERATIONS, PROJECT SITE: All project sites will be maintained in a clean and orderly state. Construction staging areas will be sited away from public view where possible. Nighttime lighting will be directed away from residential areas and have shields to prevent light spillover effects. Upon project completion, project sites on SFPUC-owned lands will be returned to their general pre-project condition, including re-grading of the site and re-vegetation or re-paving of disturbed areas to the extent this is consistent with SFPUC's Integrated Vegetation Management Policy. However, where encroachment has occurred on SFPUC-owned lands, the encroaching features may not be restored if inconsistent with the SFPUC policies applicable to management of its property. Project sites on non-SFPUC land will be restored to their general pre-project condition so that the owner may return them to their prior use, unless otherwise arranged with the property owner.

9. CULTURAL RESOURCES: All projects that will alter a building or structure, produce vibrations, or include soil disturbance will be screened to assess whether cultural resources are or may be present and could be affected, as detailed below.

Archeological Resources. No archeological review is required for a project that will not entail ground disturbance. Projects involving ground disturbance will undergo screening for

archeological sensitivity as described below and implement, as applicable, SFPUC's Standard Archeological Measures I (Discovery), II (Monitoring) and III (Testing/Data Recovery) per the Cultural Resources Attachments. Standard Construction Measure I will be implemented on all projects involving ground disturbance and Standard Archeological Measures II and III will be implemented based on the screening process described below for projects assessed as having the potential to encounter archeological sites and/or if an archeological discovery occurs during construction.

Projects involving ground disturbance will initially be screened to identify whether there is demonstrable evidence of prior ground disturbance in the project site to the maximum vertical and horizontal extent of the current project's planned disturbance. For projects where prior complete ground disturbance has occurred throughout areas of planned work, SFPUC will provide evidence of the previous disturbance in the Categorical Exemption application and no further archeological screening will be required.

For projects that are on previously undisturbed sites or where the depth/extent of prior ground disturbance cannot be documented, or where the planned project-related ground disturbance will extend beyond the depth/extent of prior ground disturbance, additional screening will be carried out as detailed below and shown on the attached flow chart titled "SFPUC Standard Construction Measure #9 Archeological Assessment Process". The additional screening will be conducted by the SFPUC's qualified archeologist (defined as meeting the Secretary of the Interior's Professional Qualifications Standards [36 CFR 61]) and, if a consultant, selected in consultation with the San Francisco Planning Department's Environmental Review Officer (ERO) and meeting criteria or specialization required for the resource type as identified by the ERO.

1) The SFPUC qualified archeologist will conduct an archival review for the project site, including review of Environmental Planning's (EP's) archeological GIS data and/or a records search of the California Historical Resources Information System (CHRIS) and other archival sources as appropriate. The qualified archeologist will also conduct an archeological field survey of the project site if, in the archeologist's judgment, this is warranted by site conditions. Based on the results, the archeologist will complete and submit to EP a Preliminary Archeological Checklist (PAC) (version dated 4/2015, to be amended in consultation with the ERO as needed). The PAC will include recommendations for the need for archeological testing, additional research and/or treatment measures consistent with Archeological Measures I, II, and III, to be implemented by the project to protect and/or treat significant archeological resources identified as being present within the site and potentially affected by the project.

2) The EP Archeologist (for projects within the City) or the ERO's archeological designee (for projects outside the City) will then conduct a Preliminary Archeological Review (PAR) of the PAC and other sources as warranted; concur with the PAC recommendations; and/or amend the PAC in consultation with the SFPUC archeologist or archeological consultant to require additional research, reports, or treatment measures as warranted based on his/her professional opinion.

3) The SFPUC shall implement the PAC/PAR recommendations prior to and/or during project construction consistent with Standard Archeological Measures I, II, and III, and

shall consult with the EP Archeologist in selecting an archeological consultant, as needed, to implement these measures.

4) Ground disturbing activities in archeologically sensitive areas, as identified through the above screening, will not begin until required preconstruction archeological measures of the PAC/PAR (e.g., preparation of an Archeological Monitoring Plan, Archeological Treatment Plan, and/or an Archeological Research Design and Data Recovery Plan) have been implemented.

Historic (Built Environment) Resources. For projects within the City that include activities with the potential for direct or indirect effects to historic buildings or structures, initial CEQA screening will include a review, for the project footprint and up to one parcel surrounding the footprint of CCSF's online planning map, all relevant survey data, preservation address files, and other pertinent sources for previously-identified, historically significant buildings and building and structures more than 45 years old that have not been previously evaluated. For projects outside of the City, initial CEQA screening will include a records search of EP's CCSF historical resources data, CHRIS, and other pertinent sources for historically significant or potentially significant buildings and structures older than 45 years.

For projects that would modify an existing building or structure that has been determined by EP as being a significant historical resource (i.e., appears eligible to qualify for the CRHR), or that would introduce new aboveground facilities in the vicinity of a significant historical resource, or that would affect previously unevaluated buildings or structures more than 45 years old, the SFPUC will retain a qualified architectural historian (defined as meeting the Secretary of the Interior's Professional Qualification standards and, if a consultant, also selected in consultation with the ERO) to conduct a historical resource evaluation (HRE). SFPUC will submit the project description and the HRE to the CCSF Planning Department Preservation Planner or to the ERO's-designated qualified architectural historian to assess potential effects. Where the potential for the project to have adverse effects on historic buildings or structures is identified, the CCSF Planning Department Preservation Planner or the ERO's designee will consult with SFPUC to determine if the project can be conducted as planned or if the project design can be revised to avoid the significant impact, and will comply with applicable procedures set forth in Historic Architectural Resource Measure I. If these options are not feasible, the project will need to undergo further review with EP and mitigation may be required. If so, the project would not qualify for a Categorical Exemption from CEQA review.

Where construction will take place in proximity to a building or structure identified as a significant historical resource but would not otherwise directly affect it, the SFPUC will implement protective measures, such as but not limited to, the erection of temporary construction barriers to ensure that inadvertent impacts to such buildings or structures are avoided.

CULTURAL RESOURCES ATTACHMENTS

Flow Chart: SFPUC Standard Construction Measure #9 Archeological Assessment Process

SFPUC Archeological Measure I (Archeological Discovery)

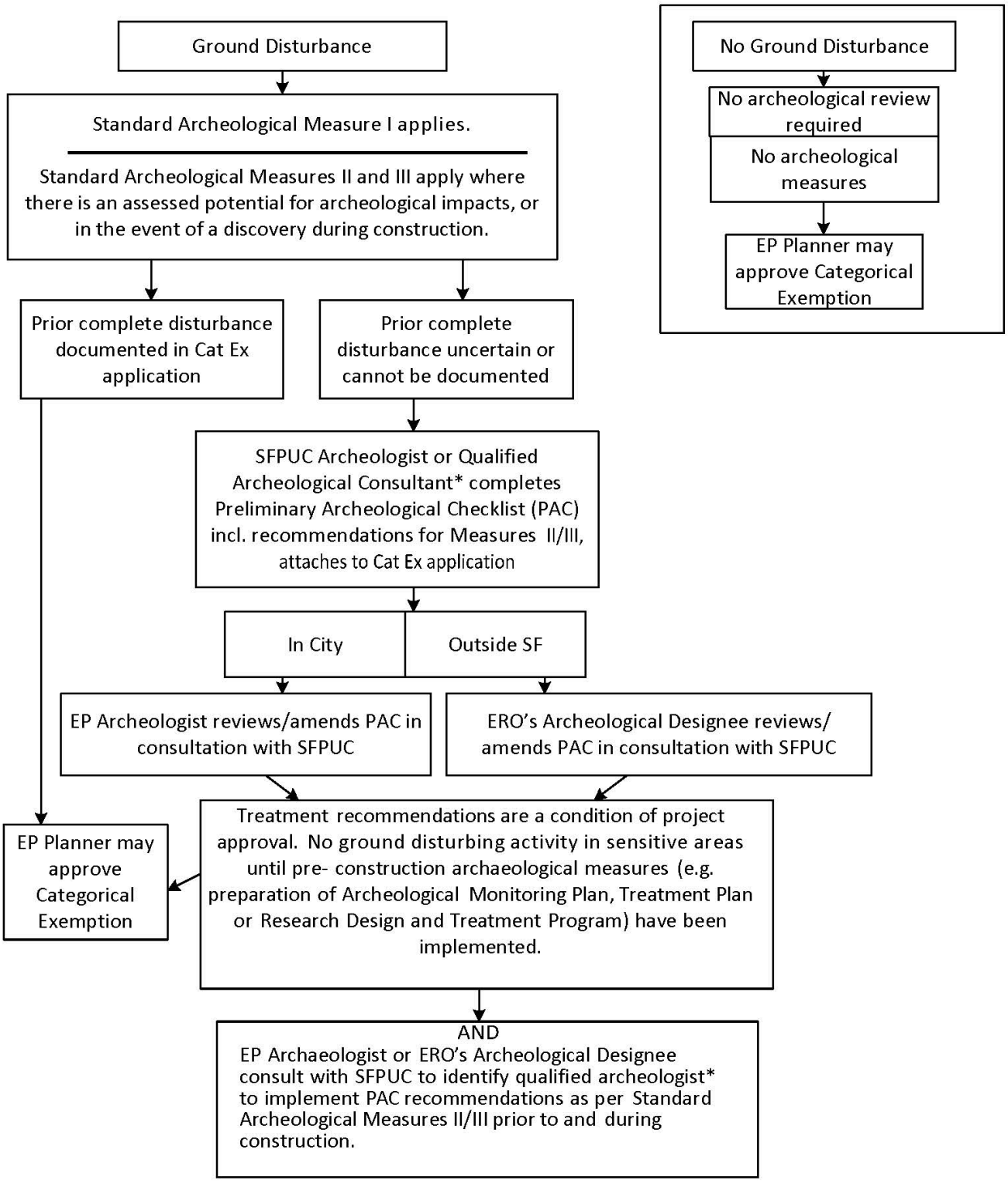
SFPUC Archeological Measure II (Archeological Monitoring)

SFPUC Archeological Measure III (Archeological Testing/Data Recovery)

Historic Architectural Resource Measure

SFPUC Preliminary Archeological Checklist (PAC)

Flow Chart: SFPUC Standard Construction Measure #9 Archeological Assessment Process



* Archeologist or archeological consultant who meets the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61) as defined in Standard Archeological Measure I.

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5/28/2015. Subject to revision

SFPUC ARCHEOLOGICAL MEASURE I (Archeological Discovery)

The following requirements are applicable to:

- All projects that will include soil (ground) disturbance, and
- Any discovery of a potential historical resource or of human remains, with or without an archeological monitor present.

Prior to ground disturbing activities:

A. **Alert Sheet**. The SFPUC shall, prior to any soils disturbing activities, distribute the Planning Department archeological resource "ALERT" sheet to each project contractor or vendor involved in project-related soils disturbing activities; ensure that each contractor circulates it to all field personnel; and provide the Environmental Review Officer (ERO) with a signed affidavit from each contractor confirming distribution to all field personnel.

Upon making a discovery:

B. **Work Suspension**. Should a potential archeological resource be encountered during project soils disturbing activity, with or without an archeological monitor present, the project Head Foreman shall immediately suspend soils disturbing activities within 50 feet (15 meters) of the discovery, protect the find from further disturbance, and notify the SFPUC Project Manager (PM) and/or Environmental Project Manager (EPM), who shall immediately notify the ERO for further consultation.

C. **Qualified Archeologist.** All archeological work conducted under this measure shall be performed by an archeologist who meets the Secretary of the Interior's Professional Qualifications Standards (36-CFR 61); consultants will be selected in consultation with the ERO and meeting the criteria or specialization required for the resource type as identified by the ERO in a manner consistent with SFPUC's on-call contracting requirements.

D. **Assessment and Additional Measures**. If the ERO determines that the discovery is a potential archeological/historical resource, the archeologist, in consultation with the ERO, shall document the find, evaluate based on available information whether it qualifies as a significant historical resource under the CEQA criteria, and provide recommendations for additional treatment as warranted. The ERO will consult with SFPUC and the qualified archeologist on these recommendations and may require implementation of additional measures as set forth below in Archeological Measures II and III, such as preparation and implementation of an Archeological Monitoring Plan, an Archeological Testing Plan, and/or an Archeological Data Recovery Plan, and including associated research designs, descendant group consultation, other reporting, curation, and public interpretation of results.

E. **Report Reviews**. All plans and reports prepared by an archeological consultant, as specified herein, shall be submitted first and directly to the ERO for review and comment with a copy to the SFPUC and shall be considered draft reports subject to revision until final approval by the ERO.

F. **Draft and Final Archeological Resources Reports**. For projects in which a significant archeological resource is encountered and treated during project implementation (see Archeological Measures II and III), the archeological consultant

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

Once approved by the ERO, copies of the FARR shall be distributed as follows: two copies to the applicable California Historic Information System Information Center (CHRIS), one copy to each descendant group involved in the project, and documentation to the San Francisco Planning Department of transmittal of the above copies. In addition, the Planning Department shall be provided one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR, which shall include copies of any formal site recordation forms (CA DPR 523 series) and/or National Register of Historic Places/California Register of Historical Resources nominations.

G. **Other Reports.** In instances of high public interest or interpretive value, the ERO may require different or additional final report content, format, and distribution than that presented above.

H. **Human Remains, Associated or Unassociated Funerary Objects.** SFPUC shall ensure that human remains and associated or unassociated funerary objects discovered during any soils disturbing activity are treated in compliance with applicable State and federal laws. In the event of the discovery of potential human remains, the construction contractor shall ensure that construction activity within 50 feet of the find is halted and the SFPUC PM, EPM, ERO, and the County Coroner are notified immediately. If the Coroner determines that the remains are of Native American origin, he/she will notify the California State Native American Heritage Commission. Subsequent consultation on and treatment of the remains will be conducted consistent with Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(d), in consultation with the ERO.

I. **Consultation with Descendant Communities**. Consistent with AB 52 requirements, if requested, the SFPUC shall provide opportunities for Native American descendant groups to provide input during project planning for projects that may affect potential Tribal Cultural Resources. In addition, on discovery during construction of an archeological site associated with descendant Native Americans, the Overseas Chinese, or other descendant group, an appropriate representative of the descendant group shall be contacted by SFPUC at the direction of the ERO. SFPUC will offer this representative the opportunity to monitor archeological field investigations of the site and to consult with the ERO regarding the appropriate treatment and, if applicable, interpretation of the site and the recovered materials.

J. **Construction Delays**. Archeological monitoring and/or data recovery programs required by this measure may suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if this is the only feasible means to reduce potential effects on a significant archeological find to a less-than-significant level.

SFPUC ARCHEOLOGICAL MEASURE II (Archeological Monitoring)

A. **Archeological Monitoring Plan (AMP).** Where an archeological field investigation to identify expected buried or submerged resources cannot reasonably be carried out during project planning/ environmental review (for example, where definitive determination would require extensive street opening prior to construction), prior to any project-related soils-disturbing activities the qualified archeologist identified under Archeological Measure I.C. will consult with SFPUC and the ERO to develop an Archeological Monitoring Plan (AMP). The AMP which will be implemented in conjunction with soil-disturbing activities during construction. Preparation and implementation of an AMP also may be required based on the results of pre-construction archeological testing or upon a discovery during construction.

   The AMP shall include the following elements, at minimum:

   - Historical context and research design for assessment of resource types likely to be encountered;
   - Project activities to be archeologically monitored and intensity of monitoring of each type and location of project construction activity; and
   - Procedures for the documentation, significance and integrity assessment, treatment, interpretation and reporting of the types of resources likely to be encountered.

B. **Reporting.** Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO at the end of construction (See Archeological Measure I.E [Report Reviews] and I.F. [Final Archeological Research Report]).

C. **Monitoring Authorities**

   - The archeological monitor will have the authority to halt construction activity at the location of a suspected resource for inspection, documentation, and assessment of the need for further measures as set forth in Archeological Measure III.
   - The Archeological Monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.
   - The Archeological Monitor(s) shall be present on the project site according to a schedule identified in the AMP, subject to modification upon ERO concurrence, based on findings.

D. **Testing/Data Recovery.** In the event of a discovery during construction, if the ERO and archeological consultant determine that the discovery is a significant resource (that is, a resource that meets the eligibility criteria of the California Register of Historic Resources or qualifies as a unique archeological resource) that will be adversely affected (that is, where the project would result in loss of data potential) or that additional investigation is required to make this determination, all applicable elements of Archeological Measure III (Archeological Testing/Data Recovery) also will be implemented.

SFPUC ARCHEOLOGICAL MEASURE III (Testing / Data Recovery)

The following provisions apply prior to or during construction when a significant archaeological resource (as defined in Measure II.D) or an archeological resource of undetermined significance is expected to be present in the work area and the ERO, in consultation with the qualified archeologist, determines that an archeological field investigation is needed to determine: a) the presence of an archeological resource, b) whether it retains depositional integrity, and c) whether it qualifies as a legally significant resource under CEQA criteria. All archeological work under this Measure will be carried out by a qualified archeologist as identified in Archeological Measure I.C. Per Archeological Measure I.J, implementation of this measure shall not exceed four weeks except at the direction of the ERO and only if this is the only feasible means to reduce potential effects on a significant archeological find to a less-than-significant level.

A. Archeological Testing Program. If an archeological investigation is required in order to verify resource location and/ or assess the significance of the resource, the archeological consultant shall consult with the ERO to prepare and implement an Archeological Testing Plan (ATP) that identifies:

- Key research questions and associated data needs,
- Testing/ sampling methods, and
- Testing locations.

Results of testing shall be presented to ERO in a written report following Measure I.E. If, based on the archeological testing program, the archeological consultant finds and the ERO concurs that significant archeological resources may be present, Measures III.B and/or III.C below will be implemented.

B. Treatment. If the project could adversely affect a significant (CRHR-eligible) archeological resource, preservation in place is the preferred manner of mitigating impacts, as detailed in CEQA Guidelines 15126.6(b) (3)(a) and (b).

If preservation in place is determined to be infeasible, the SFPUC at its discretion shall either:

- Re-design the proposed project so as to reduce the adverse effect to a less- than-significant level through preservation in place or other feasible measures; and/or
- For a resource important for its association with an important event or person, or which is of demonstrable public interest for both its scientific and historical values (e.g., a submerged ship), and where feasible, preserve the resource in place with appropriate documentation; or, if not feasible to preserve in place, systematically document and/or recover for interpretive use, at the discretion of the ERO, and/or;

For an archeological resource significant primarily for its data potential, design and implement an archeological data recovery program, as detailed under Measure III.D, below.

C. Archeological Data Recovery Plan (ADRP). For resources for which the elected treatment is archeological data recovery, the archeological consultant, in consultation with the ERO, shall prepare and implement an ADRP. It will identify how the significant information the archeological resource is expected to contain will be recovered and

preserved. Data recovery results will be reported in the FARR, as detailed in Measure I.F. The ADRP shall include the following elements:

- Historic context and research design
- Field methods and procedures, including sampling strategy
- Archeological monitoring recommendations for ongoing construction
- Cataloguing and laboratory analysis
- Discard, deaccession, and curation policy
- Interpretive program
- Security measures

HISTORIC ARCHITECTURAL RESOURCE MEASURE

A. **Qualified Architectural Historian.** When a building or structure that has been determined to be an historical resource is identified within a project's area of potential effects, the SFPUC will retain a qualified architectural historian (defined as meeting the Secretary of the Interior's Professional Qualification standards and, if a consultant, selected in consultation with the ERO) to conduct a historical resource evaluation (HRE).

B. **Effects Assessment**. The SFPUC will submit the project description and the HRE to CCSF Planning Department Preservation Planner or to the ERO's-designated qualified architectural historian to assess potential effects. If a potential for the project to have adverse effects on historic buildings or structures is identified, the CCSF Planning Department Preservation Planner or the ERO's architectural historian designee will consult with SFPUC to determine if the project can be implemented as planned or if the project design can be revised to avoid the significant impact. If these options are not feasible, the project will need to undergo further review with EP and mitigation may be required. If so, the project may not qualify for a Categorical Exemption from CEQA review.

C. **Potential Vibration Effects**.

1. Where construction takes place in proximity to a building or structure identified as a significant historical resource but would not otherwise directly affect it, the SFPUC will implement protective measures, such as, but not limited to, the erection of temporary construction barriers to ensure that inadvertent impacts to such structures are avoided.

2. For projects that will use vibratory equipment generating vibration in excess of 0.2 inches per second, peak particle velocity adjacent to historic buildings susceptible to vibration, the SFPUC will engage a qualified historic architect or historic preservation professional to document and photograph the pre-construction condition of the building and prepare a plan for monitoring the building during construction. The monitoring plan will be submitted to and approved by CCSF Planning Department Preservation Planner or the ERO's architectural historian designee prior to the beginning of construction and will be implemented during construction. The monitoring plan will identify how often monitoring will occur, who will undertake the monitoring, reporting requirements on vibration levels, reporting requirements on damage to adjacent historical resources during construction, reporting procedures to follow if such damage occurs, and the scope of the preconstruction survey and post-construction conditions assessment.

3. If any damage to a historic building or structure occurs, the SFPUC will modify activities to minimize further vibration.

4. If any damage occurs, the building will be repaired following the Secretary of the Interior's Standards for the Treatment of Historic Properties under the guidance of a qualified historic architect or historic preservation professional.

D. **Minor Alteration of Historic Buildings or Structures.**

1. If a project involves minor alterations and/or rehabilitation to a building that qualifies as an historical resource, the proposed design will be reviewed by a qualified historic preservation professional in consultation with the CCSF Planning Department Preservation Staff or the ERO's architectural historian, who shall identify modifications to project design, as needed, to avoid or minimize effects to the historic integrity of the historical resource. The assessment also will provide direction on ensuring compliance with Secretary of the Interior's Standards and Guidelines.

2. To qualify for a Categorical Exemption, the project must be modified as identified in the HRE and all work must be conducted in compliance with Secretary of the Interior's Standards under the guidance of an architectural historian such that historical integrity of the building or structure would not be compromised.

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San Francisco Public Utilities Commission Preliminary Archeological Checklist (PAC)

A. PROJECT INFORMATION:

Date: _____ **SFPUC Archeological Reviewer:** _____

Project name: _____ **Case No:** _____

Application type: ☐ EE ☐ CatEx

☐ In City ☐ Outside of City

Project address: _____

APN/Cross streets:_____ OR **City/ County:**_____

EP Planner:_____ **EP Archeological Reviewer designee:**_____

Consultant Archeologist name/firm (if applicable):_____

1. PROJECT DESCRIPTION: (include description of construction methods, all potentially ground-disturbing activities including parking, staging, equipment and spoils storage, temporary and permanent work areas, utility lines)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. POTENTIAL GROUND DISTURBANCE

Yes	No	Project Component
☐	☐	Excavation (basement, elevator, utilities, seismic retrofit, remediation, underground vaults, septic tank system, culverts, etc.) Maximum depth: _____

2. POTENTIAL GROUND DISTURBANCE (cont.)

Yes	No	Project Component
☐	☐	Pipeline replacement or installation (specify cut and cover, directional drilling, pipe bursting, etc):
☐	☐	Tunnels, transport storage boxes
☐	☐	Bore pits, test pits
☐	☐	Shallow Building Foundation (Mat, Spread Footings, etc.) Depth:
☐	☐	Piles, piers, micropiles, pilings, piling replacement
☐	☐	Grading, scraping
☐	☐	Demolition
☐	☐	Construction staging, spoils on unpaved area, fill
☐	☐	Road construction
☐	☐	Geotechnical trenching (dimensions)_____
☐	☐	New rip rap
☐	☐	Wharf or seawall modification
☐	☐	Other (specify):

Anticipated maximum extent of project ground disturbance:
Vertical_____Horizontal_____

APE Map Attached: Y N

3. PREVIOUS SOILS DISTURBANCE AT PROJECT SITE:

Has the project site been previously disturbed by any of the following?

Yes	No	**Component of disturbance**
☐	☐	Existing Basement Depth:_____ Area:_____
☐	☐	Existing Foundation (footings, perimeter, piles, micropiles, etc.) Depth:
☐	☐	Site remediation/UST installation or removal, other excavation. Depth:
☐	☐	Site Grading
☐	☐	Demolition
☐	☐	Dredging
☐	☐	Piling installation (width and depth of trench):_____
☐	☐	Riprap
☐	☐	Seawall construction
☐	☐	Other (specify):

4. Has the entire project area previously been disturbed to the maximum depth and extent of proposed project disturbance? Y N
(Attach documentary evidence such as plans and profiles of prior trenching, utility street occupancy, historic photos, specifications from prior projects, etc.)
List attachments provided:_____
_____

☐ **Complete prior disturbance adequately documented; stop here, no further archeological assessment is required.** Assessed by: _____

☐ **Prior ground disturbance is unknown or cannot be adequately documented; continue to B.**

SFPUC Preliminary Archeological Checklist

B. ARCHIVAL AND ARCHEOLOGICAL DATA ASSESSMENT

1. ARCHIVAL AND DATA REVIEW

Dates of review:_____

Resources reviewed:

☐ Maher zone maps. Dates/ origin/ depth of fill if known_____

☐ Geotechnical data for project site and vicinity (Cite report_____)

☐ EP Archeological GIS maps (all layers or specify applicable layers)_____

_____

☐ Sanborn Insurance maps (1887-93, 1899-1900)

☐ U.S. Coast Survey maps (1853, 1857, 1869)

☐ Information Center archeological records search (attach request and response)

☐ USFS/ BLM/ NPS archeological files (upcountry projects)

☐ NAHC Sacred Lands File

☐ Native American/ Ethnic group consultation

☐ Other:

Findings:

☐ No previously documented resources present

☐ Archival research suggests resources are or may be present within or immediately adjacent to the project area where soils disturbance will occur

2. ARCHEOLOGICAL FIELD INVENTORY

☐ Not warranted; no exposed ground surface in project area

☐ Results negative

☐ Results positive

☐ Survey results inconclusive

Archeologist/ Firm_____ Date of Survey_____

Attach Archeological Survey Report/Memo; may combine with results of archival review.

3. SUMMARY OF RESULTS OF PROJECT ASSESSMENT

Site History/Formation:

_____

_____

_____

_____

_____

_____

Recorded/documented archeological sites/ investigations on/in the vicinity of the project site:

_____

_____

_____

C. SFPUC CONCLUSIONS AND RECOMMENDATIONS

1. NO EFFECTS TO ARCHEOLOGICAL RESOURCES EXPECTED:

☐ Project effects limited to previously-disturbed soils.

☐ Project effects limited to culturally sterile soils.

☐ Based on assessment under B, above, no potentially CEQA-significant archeological

resources are expected within project area affected soils.

2. AVOIDANCE AND TREATMENT MEASURES NECESSARY TO AVOID AN ADVERSE EFFECT TO SIGNIFICANT ARCHEOLOGICAL RESOURCES:

☐ Archeological Measure I, Discovery: low potential to adversely affect archeological resources; may be avoided by implementation of SFPUC Standard Archeological Measure I (Discovery during Construction), with implementation of Standard Archeological Measures II (Monitoring) and/or III (Testing/Data Recovery) in the event of a discovery during construction.

☐ Archeological Measure II, Monitoring: some potential for the project to adversely affect archeological resources; may be avoided by implementation of SFPUC Standard Archeological Measure II (Archeological Monitoring) during construction.

☐ Archaeological Measure III, Testing/Data Recovery: potential for the project to adversely affect archeological resources; may be avoided by implementation of SFPUC Standard Archeological Measure III (Archeological Testing/Data Recovery)

Implementation Required:

☐ prior to or ☐ during construction

☐ CEQA evaluation of the project requires preparation and implementation of an archeological research design and treatment plan (ARDTP) by a qualified archeological consultant. See attached scope of work for the ARDTP.

D. EP ARCHEOLOGIST/ ERO-ARCHEOLOGICAL DESIGNEE REVIEW

☐ I concur with the conclusions and recommendations provided in Section C, above.

☐ Additional/ alternative measures recommended (detail):

_____
_____
_____
_____
_____
_____
_____

☐ Meeting requested

APPENDIX B

CHERRY VALLEY DAM AIR QUALITY ESTIMATE DETAILED REPORT

Cherry Valley Dam Estimate Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cherry Valley Dam Estimate
Construction Start Date	5/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	53.0
Location	37.97239679956273, -119.91464403280023
County	Tuolumne
City	Unincorporated
Air District	Tuolumne County APCD
Air Basin	Mountain Counties
TAZ	3030
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.0	16.7	114	133	0.41	4.00	52.6	56.6	3.68	10.8	14.4	—	42,855	42,855	1.73	0.40	2.93	43,020
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.37	1.15	7.83	9.04	0.03	0.27	3.21	3.49	0.25	0.70	0.95	—	2,932	2,932	0.12	0.03	0.09	2,943
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.21	1.43	1.65	0.01	0.05	0.59	0.64	0.05	0.13	0.17	—	485	485	0.02	< 0.005	0.01	487

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	20.0	16.7	114	133	0.41	4.00	52.6	56.6	3.68	10.8	14.4	—	42,855	42,855	1.73	0.40	2.93	43,020
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	1.37	1.15	7.83	9.04	0.03	0.27	3.21	3.49	0.25	0.70	0.95	—	2,932	2,932	0.12	0.03	0.09	2,943
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.25	0.21	1.43	1.65	0.01	0.05	0.59	0.64	0.05	0.13	0.17	—	485	485	0.02	< 0.005	0.01	487

3. Construction Emissions Details

3.1. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	19.7	16.5	112	128	0.40	4.00	—	4.00	3.68	—	3.68	—	41,937	41,937	1.70	0.34	—	42,081
Dust From Material Movement	—	—	—	—	—	—	13.1	13.1	—	6.73	6.73	—	—	—	—	—	—	—
Onsite truck	0.06	0.05	1.57	0.55	< 0.005	< 0.005	38.9	38.9	< 0.005	3.88	3.88	—	224	224	< 0.005	0.04	0.18	235
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	7.70	8.75	0.03	0.27	—	0.27	0.25	—	0.25	—	2,872	2,872	0.12	0.02	—	2,882

Dust From Material Movement	—	—	—	—	—	—	0.90	0.90	—	0.46	0.46	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	2.28	2.28	< 0.005	0.23	0.23	—	15.3	15.3	< 0.005	< 0.005	0.01	16.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.40	1.60	0.01	0.05	—	0.05	0.05	—	0.05	—	476	476	0.02	< 0.005	—	477
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.42	0.42	< 0.005	0.04	0.04	—	2.53	2.53	< 0.005	< 0.005	< 0.005	2.65
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.19	0.29	4.74	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	695	695	0.02	0.02	2.75	704
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.26	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.3	44.3	< 0.005	< 0.005	0.08	44.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.34	7.34	< 0.005	< 0.005	0.01	7.43

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	5/1/2026	6/4/2026	5.00	25.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Off-Highway Trucks	Diesel	Average	10.0	16.0	367	0.40
Grading	Excavators	Diesel	Average	2.00	16.0	36.0	0.38
Grading	Rubber Tired Dozers	Diesel	Average	1.00	16.0	367	0.40
Grading	Rubber Tired Loaders	Diesel	Average	2.00	16.0	150	0.36
Grading	Off-Highway Trucks	Diesel	Average	2.00	16.0	376	0.38

Grading	Generator Sets	Diesel	Average	1.00	16.0	201	0.74
Grading	Generator Sets	Diesel	Average	6.00	8.00	20.0	0.74

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	20.0	44.0	LDA,LDT1,LDT2
Grading	Vendor	—	8.76	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	88.0	0.30	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	—	25.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.6	annual days of extreme heat
Extreme Precipitation	17.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	80.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	0	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	0	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	0	0	0	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	1	1	1	2
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	75.1

AQ-PM	6.06
AQ-DPM	0.72
Drinking Water	60.2
Lead Risk Housing	20.8
Pesticides	49.0
Toxic Releases	0.81
Traffic	8.63
Effect Indicators	—
CleanUp Sites	25.6
Groundwater	30.9
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	43.8
Solid Waste	78.1
Sensitive Population	—
Asthma	41.6
Cardio-vascular	36.0
Low Birth Weights	5.72
Socioeconomic Factor Indicators	—
Education	25.9
Housing	10.5
Linguistic	0.00
Poverty	39.4
Unemployment	25.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	59.78442192
Employed	41.16514821
Median HI	41.60143719
Education	—
Bachelor's or higher	30.70704478
High school enrollment	100
Preschool enrollment	42.14038239
Transportation	—
Auto Access	39.77928911
Active commuting	5.376620044
Social	—
2-parent households	51.40510715
Voting	68.3947132
Neighborhood	—
Alcohol availability	78.42935968
Park access	31.04067753
Retail density	4.773514693
Supermarket access	12.45989991
Tree canopy	98.29334018
Housing	—
Homeownership	64.41678429
Housing habitability	77.32580521
Low-inc homeowner severe housing cost burden	57.48748877
Low-inc renter severe housing cost burden	65.8026434
Uncrowded housing	74.48992686
Health Outcomes	—
Insured adults	60.5800077
Arthritis	0.0

Asthma ER Admissions	56.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	10.2
Cognitively Disabled	12.5
Physically Disabled	16.0
Heart Attack ER Admissions	4.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	66.2
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	77.3
SLR Inundation Area	0.0
Children	39.2
Elderly	14.5
English Speaking	98.1
Foreign-born	2.0

Outdoor Workers	51.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	94.9
Traffic Density	3.6
Traffic Access	0.0
Other Indices	—
Hardship	42.5
Other Decision Support	—
2016 Voting	82.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	11.0
Healthy Places Index Score for Project Location (b)	54.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Land use NA
Construction: Construction Phases	6 month duration
Construction: Off-Road Equipment	test
Construction: Trips and VMT	Worker distance based on Sonora to project site. Onsite trucks include haul trucks between Staging Area 2 and the main project work area and water trucks. Distance conservatively based on estimated water truck trip distance.

CalEEMod Onsite Truck Trip Calculation for Representative Maximum Daily Phase

Truck Type	Onsite Truck Trips per Day	
Onsite Haul Trips	56	700 round trips divided over 25 day phase duration
Onsite Water Trips	32	1 truck per hour, 2 trips per hour, 16 hours per day for double shifted
Total	**88**	

Notes:

1. Modeled over 0.3 miles, which is conservative distance from Cherry Compound to project work area. Onsite haul trips would happen over shorter distance (0.1 miles) from Staging Area 2 to project work area.

Construction Schedule (from Table 4 in PD)

Activity	Duration - single shift		Duration - double shift	
	weeks	days	weeks	days
Site Preparation and Mobilization	3	15	3	15
Excavation of Landslide Debris and Material Processing	8	40	5	25
Embankment Construction	2	10	2	10
Erosion Protection (Placement and Grouting of Riprap)	5	25	4	20
Site Restoration	6	30	4	20

Construction Vehicle Trips (from Table 5 in PD)

Calculated

Activity	Daily Worker Trips (single-shift scenario) (Round Trip)	Daily Workers Trips (double-shift scenario)	Onsite truck trips	Total Number of Vendor Truck Trips (Round Trip)	Vendor truck trips (trucks per day) - round trips		Onsite truck trips (trucks per day) - round trips	
					single shift	double shift	single shift	double shift
Site Preparation and Mobilization	6 to 8	12 to 16	10	25	2	2	1	1
Excavation of Landslide Debris and Material Processing	10	20	700	N/A	0	0	18	28
Embankment Construction	6	12	200	N/A	0	0	20	20
Erosion Protection (Placement and Grouting of Riprap)	10	20	425	360	14	18	17	21
Site Restoration	6	12	10	25	1	1	0	1