San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
628.652.7600
www.sfplanning.org

ADDENDUM 1 TO ENVIRONMENTAL IMPACT REPORT

Date of Addendum Publication:	July 13, 2023
Date of EIR Certification:	December 3, 2009
Case Nos.:	2006.0137E (EIR) and 2006.0137ENV-04 (Addendum 1)
Project Title:	Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir (Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project)
Project Sponsor:	San Francisco Public Utilities Commission, Sue Chau, 415.554.3238, schau@sfwater.org
Lead Agency:	San Francisco Planning Department
Staff Contact:	Timothy Johnston, 628.652.7569, timothy.johnston@sfgov.org

REMARKS

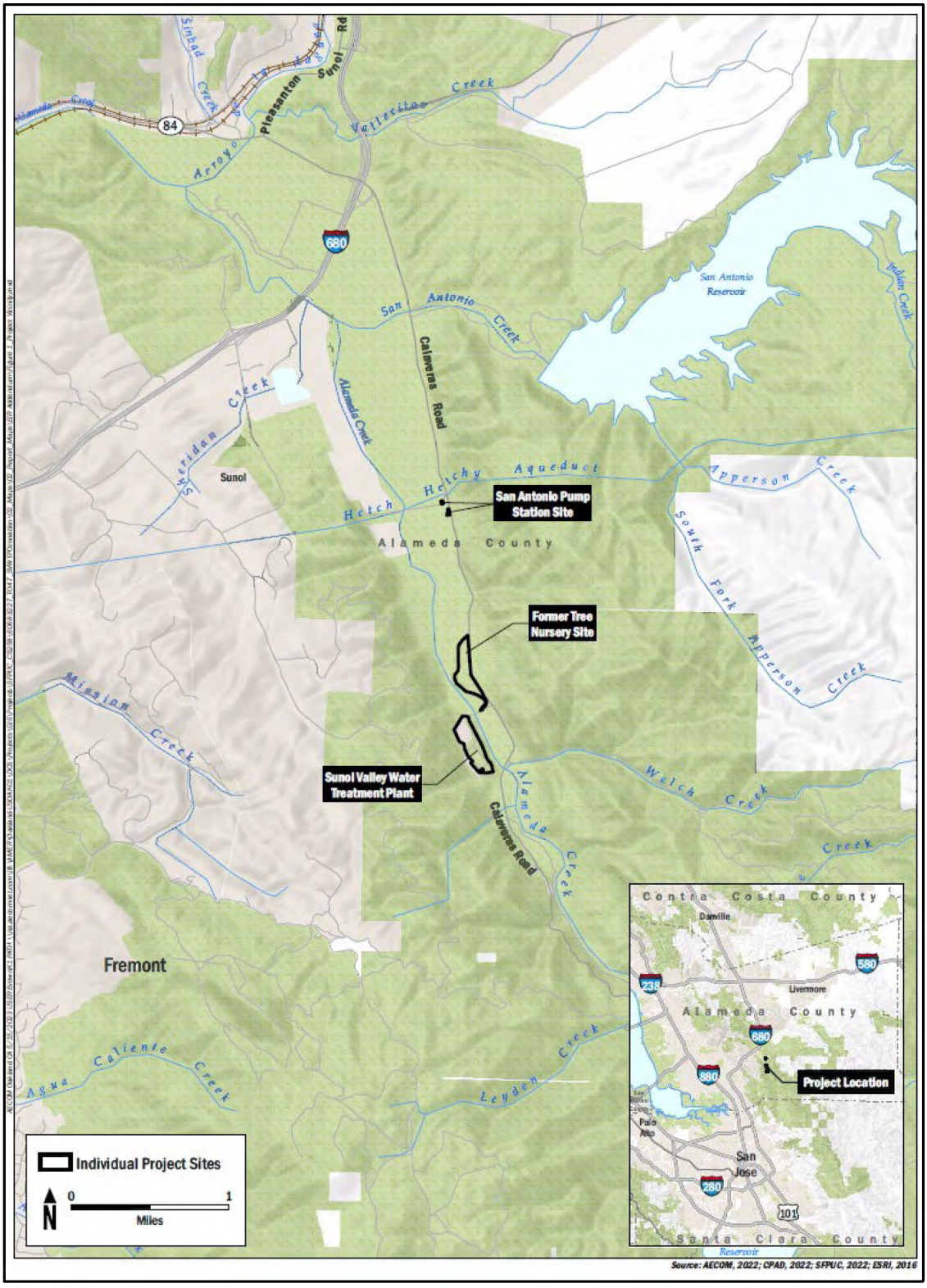
Background

On December 3, 2009, the San Francisco Planning Commission certified the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Final Environmental Impact Report (EIR), and the San Francisco Public Utilities Commission (SFPUC) subsequently approved the project (San Francisco Planning Department file number 2006.0137E). The approved project[1] analyzed in the EIR includes the construction and operation of a new treated water reservoir, a new chlorine contact tank and associated water treatment facilities, an additional flocculation[2] and sedimentation basin, new effluent pipelines, and a new 78-inch pipeline connecting the treated water reservoir to the existing 78-inch plant discharge pipeline, which transports water from the Sunol Valley Water Treatment Plant (the plant) to the existing Alameda Siphons (where treated water enters the water transmission system). The plant occupies 28 acres in unincorporated Alameda County, approximately 3 miles south of the intersection of Calaveras Road and Interstate 680 (**Figure 1**). The plant is currently developed with approximately 30 buildings and structures, including an operations building and various water treatment facilities such as water and chemical storage tanks, flocculation and sedimentation basins, and filter bays.

[1] The final approved project—as described in the EIR for the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir—is referenced in this addendum as the "approved project."

[2] Flocculation is a water treatment process where solids form larger clusters, or flocs, to be removed from water. Chemical agents are often used to help this process.

Figure 1: Project Location



In addition to the new water treatment facilities at the plant, the approved project analyzed in the EIR included spoils disposals areas on: 1) former nursery sites to the east of the plant between Alameda Creek and Calaveras Road, and 2) vacant land and quarry pits approximately 2.5 miles north of the plant, southwest of the intersection of Calaveras Road and Interstate 680.

Proposed Revisions to Project

The SFPUC proposes to modify the approved Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir project to construct a new ozonation facility and a new polymer feed facility at the plant, and to conduct repairs and improvements to existing treatment facilities at the plant. SFPUC also proposes electrical equipment upgrades at facilities that deliver power to the treatment plant to ensure that operation of the ozonation facility does not cause overloads on the Calaveras Substation main transformer, approximately 2 miles north of the plant. The proposed new ozonation facility, new polymer feed facility, upgrades to existing plant treatment facilities, and electrical upgrades constitute the modified project. The purpose of the modified project is to ensure reliable operation of the treatment plant and to meet customer expectations regarding water quality.

The proposed ozonation facility is designed to reduce the concentration of taste-and-odor-causing compounds in the plant's raw water. The proposed polymer (flocculation aid[3]) feed facility is designed to address turbidity issues during high flow rates at each of the five existing sedimentation basins at the plant. Other proposed repairs and improvements to existing treatment facilities at the plant include repairing the lining of the flocculation and sedimentation basins, replacing the cationic polymer (coagulant aid[4]) system, and replacing the filter inlet and waste valves. Electrical upgrades are proposed at the plant and at a former tree nursery site[5] and the San Antonio Pump Station, approximately 0.2 mile and 1.5 miles north of the plant, respectively (**Figure 1**). SFPUC also proposes to use the former tree nursery site for construction staging. The plant, former tree nursery site, and San Antonio Pump Station compose the modified project site. No additional activities at the approved project's spoils disposal areas are proposed under the modified project.

Project Setting

The modified project would be constructed primarily at the Sunol Valley Water Treatment Plant, in an unincorporated portion of Alameda County in the Sunol Valley. The existing plant occupies 28 acres on the western side of Alameda Creek, approximately 3 miles south of the intersection of Calaveras Road and Interstate 680, and approximately 3 miles north of the Calaveras Reservoir. Locations for construction staging and electrical upgrades include an SFPUC-owned former tree nursery site (approximately 0.2 mile north of the plant) that is currently vacant, and the San Antonio Pump Station (approximately 1.5 miles north of the plant). These project sites are shown on Figure 1. The project

[3] Flocculation aids are chemical agents that help to remove suspended solids from water by aggregating the suspended solids into flakes or "flocs" that float to the surface of the water or settle at the bottom.

[4] Coagulant aids are chemical agents that help to bring insoluble materials together by manipulating the charges of particles. With coagulants' positive charge, the negatively charged particles in the water are neutralized. This causes the suspended solids in the water to bind together into larger flocs that settle at the bottom of water.

[5] The former tree nursery that is part of the modified project site is a different area from the former nursery sites used for spoils disposal for the approved project.

area is characterized by undeveloped grassland and mixed-oak woodland, interspersed with water conveyance facilities and equipment. The nearest semi-urbanized area is the unincorporated Town of Sunol, approximately 4.9 miles northwest of the plant.

Existing Facilities

The existing plant employs a conventional treatment process that includes pH control,[6] coagulation/ flash mix, flocculation, sedimentation,[7] filtration,[8] and disinfection.[9] As shown on **Figure 2**, the northern portion of the plant (which is part of the approved and modified project site) consists of a treated water reservoir, chlorine contact tank, chemical storage areas, an electrical building, and a washwater tank.[10] The plant access road (Main Plant Road) from Calaveras Road enters the plant from the northeast. The southern portion of the plant site consists of an operations building, flocculation and sedimentation basins and filters, with a washwater recovery basin at the southern end. The access road separates the northern and southern portions of the plant and wraps around the western side of the southern portion. These facilities are interspersed with open areas consisting of a mix of developed and vegetated land covers that include water treatment and conveyance infrastructure, California annual grassland, and coast live oak woodland. The former tree nursery site to the north of the plant contains a mix of gravel-lined former plant beds and access roads within the site surrounding the former plant beds, ruderal, and California annual grassland, with some coast live oak woodland along the site boundaries. Power is provided to the plant through a 21-kilovolt overhead electrical distribution line from the Calaveras Substation main transformer.

The plant operates at variable flow rates and supplements the Hetch Hetchy supply to meet total system treatment demand. The plant's primary purpose is to treat local water supplies from the Calaveras and San Antonio Reservoirs. However, when needed, unfiltered Hetch Hetchy water can be diverted to the plant for treatment. Typically, the plant is operated at relatively low flow rate conditions of approximately 20 million gallons per day when Hetch Hetchy water is fully operational. The plant's daily operating rate can range up to 160 million gallons per day when Hetch Hetchy is offline.

[6] The pH system is used to lower the pH to help with controlling bromate formation that can come from elevated bromide levels at San Antonio Reservoir.

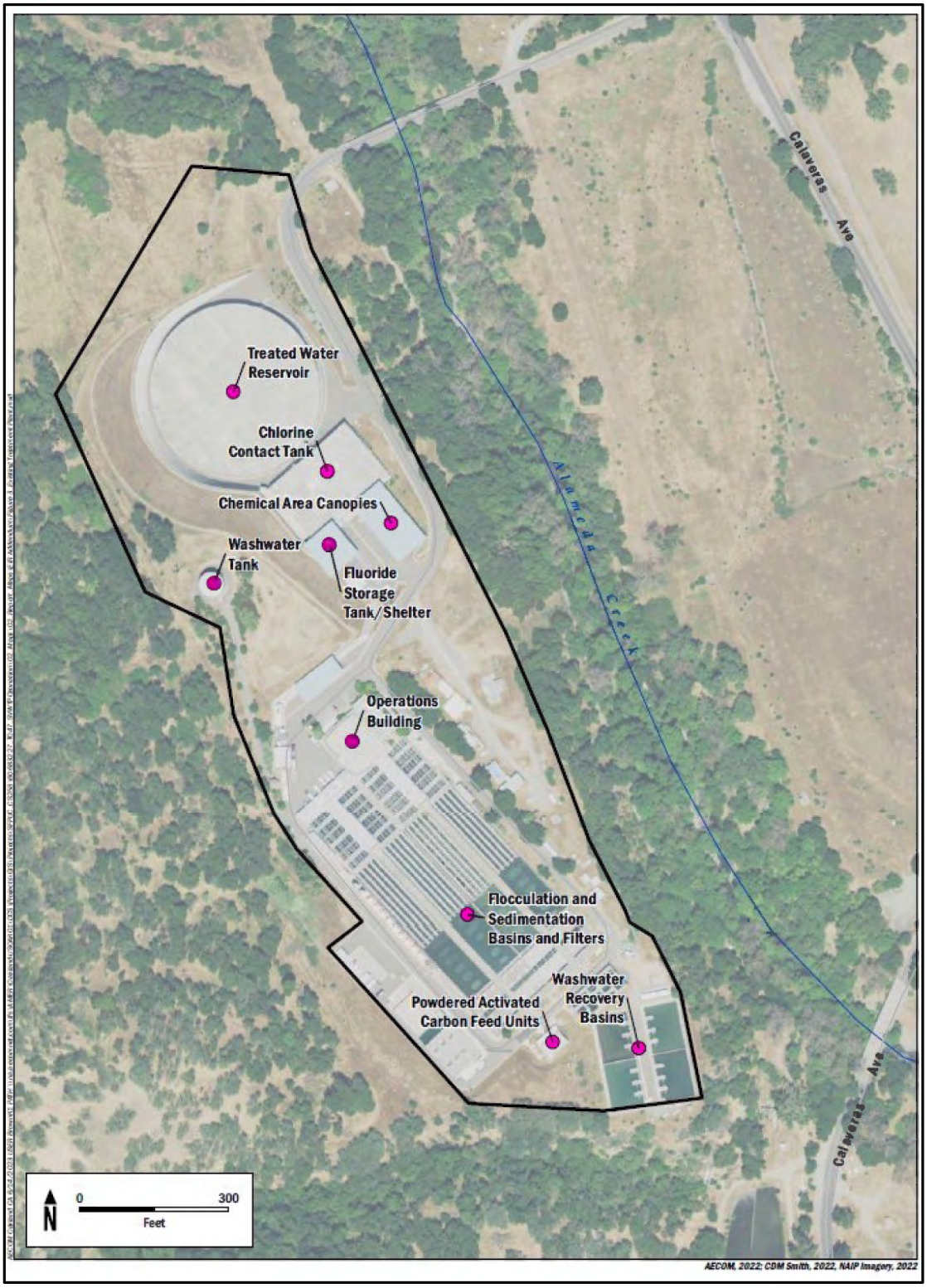
[7] Sedimentation is a common way of treating water. It is a process that removes solids that float and settle in the water. The process relies on the use of sedimentation tanks that remove larger solids.

[8] During filtration, water passes through filters that have different pore sizes and are made of different materials (such as sand, gravel, and charcoal). These filters remove dissolved particles and germs, such as dust, chemicals, parasites, bacteria, and viruses.

[9] After the water has been filtered, water treatment plants may add one or more chemical disinfectants (such as chlorine, chloramine, or chlorine dioxide) to kill any remaining parasites, bacteria, or viruses.

[10] The wash water tank holds water that is used to backwash or backflush the plant's filters once they have built up contaminants.

Figure 2: Sunol Valley Water Treatment Plant Existing Facilities



Description of the Modified Project

SFPUC proposes to construct the following facilities and improvements at the existing Sunol Valley Water Treatment Plant and associated sites near Sunol, California:

- A new ozonation facility on a 2.7-acre site at the plant
- A new polymer feed facility on a 0.2-acre site at the plant
- Relocation of an existing radio tower, currently on the site of the proposed ozonation facility, to a new location north of the plant washwater tank
- Upgrades to existing facilities at the plant, including the cationic polymer system, chemical pipe improvements, and filter air scour piping; repairs and upgrades to the flocculation/sedimentation basins and filters, including replacement of the filter/waste valves and sludge collection system; and repair of the settled water conduit leakage at the plant
- Off-site electrical system upgrades at the San Antonio Pump Station and at the southern end of the former tree nursery site north of the plant

The 20.2-acre former tree nursery site would be used for construction staging for the modified project. The locations of the proposed project elements are shown on **Figures 3, 4, and 5**, and these elements are described further below.

Ozonation Facility

SFPUC would construct a new ozonation facility in a partially developed area on the eastern side of the plant site. The site plan is shown on **Figure 6**. The primary objective of this proposed facility is to reduce the concentration of taste and odor-causing compounds in the plant's raw water. Secondary objectives are to provide additional primary disinfection with ozone as part of a multi-barrier disinfection strategy with the existing sodium hypochlorite disinfection process in the chlorine contact tanks downstream of the plant filters in the treatment process; improve treatment reliability; provide additional control of chlorinated disinfection byproducts; and provide oxidation of emerging contaminants, and color removal.

Figure 3: Proposed Modified Project Components at Sunol Valley Water Treatment Plant

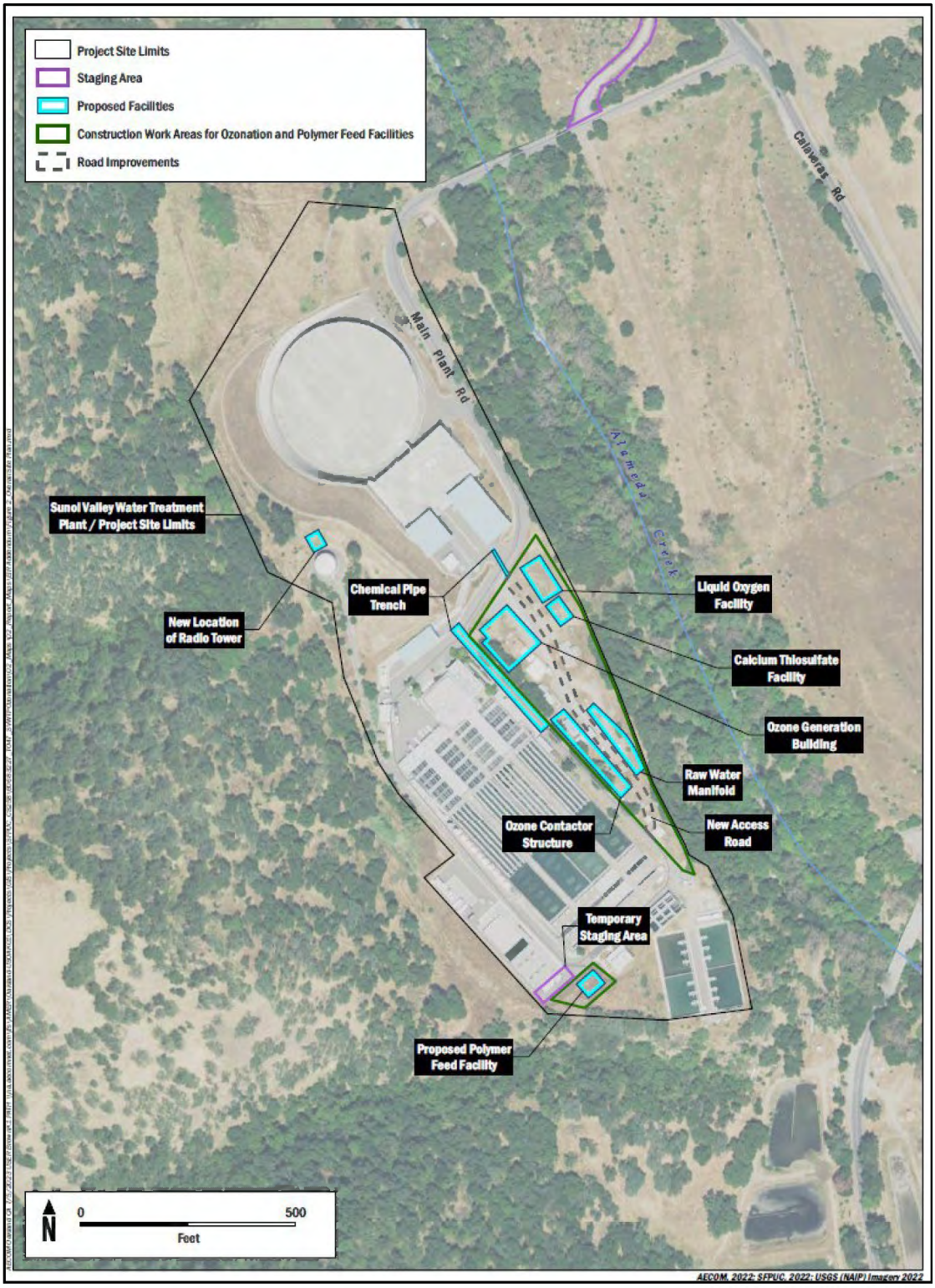


Figure 4: Proposed Modified Project Components at Former Tree Nursery Site

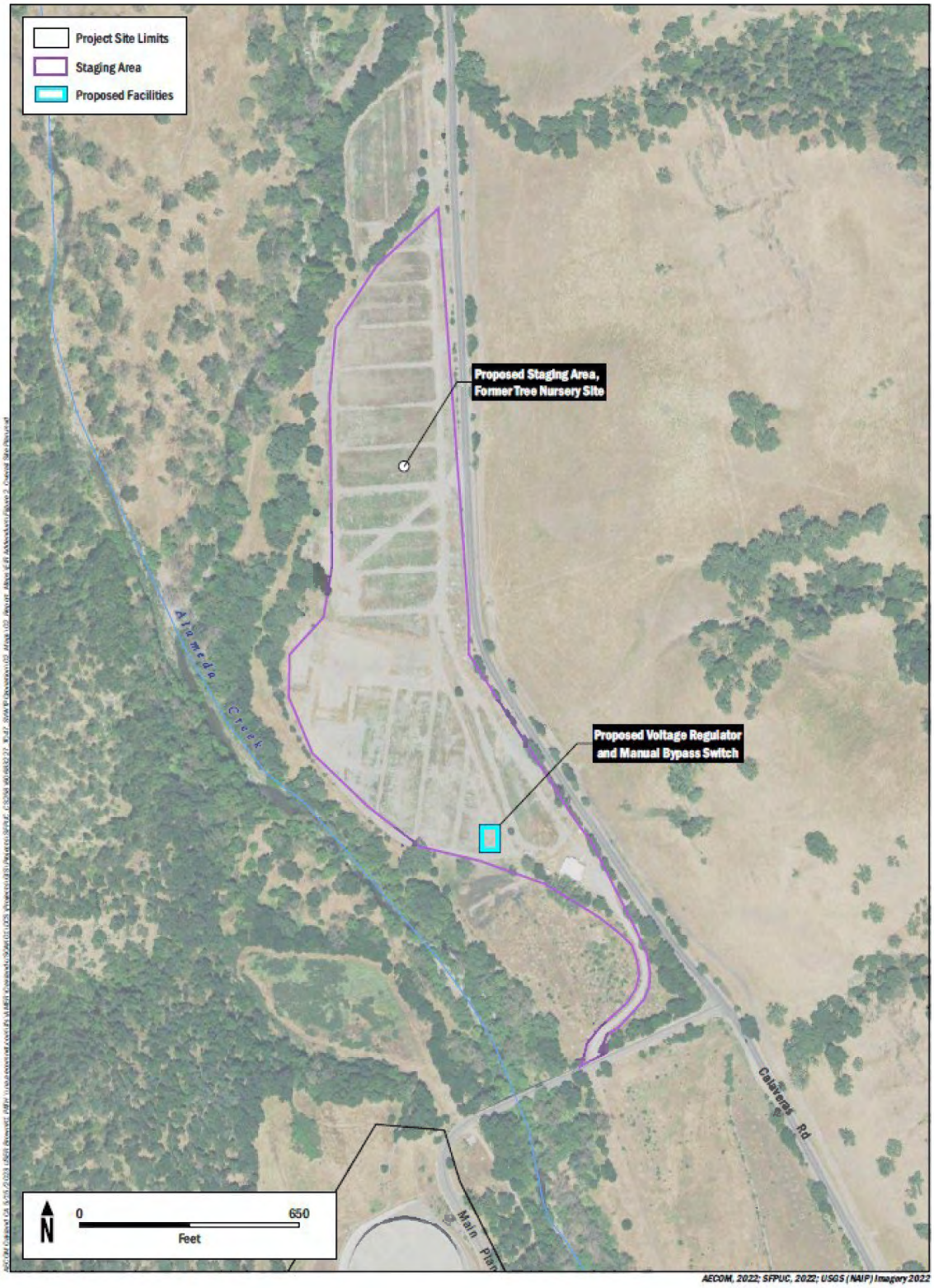
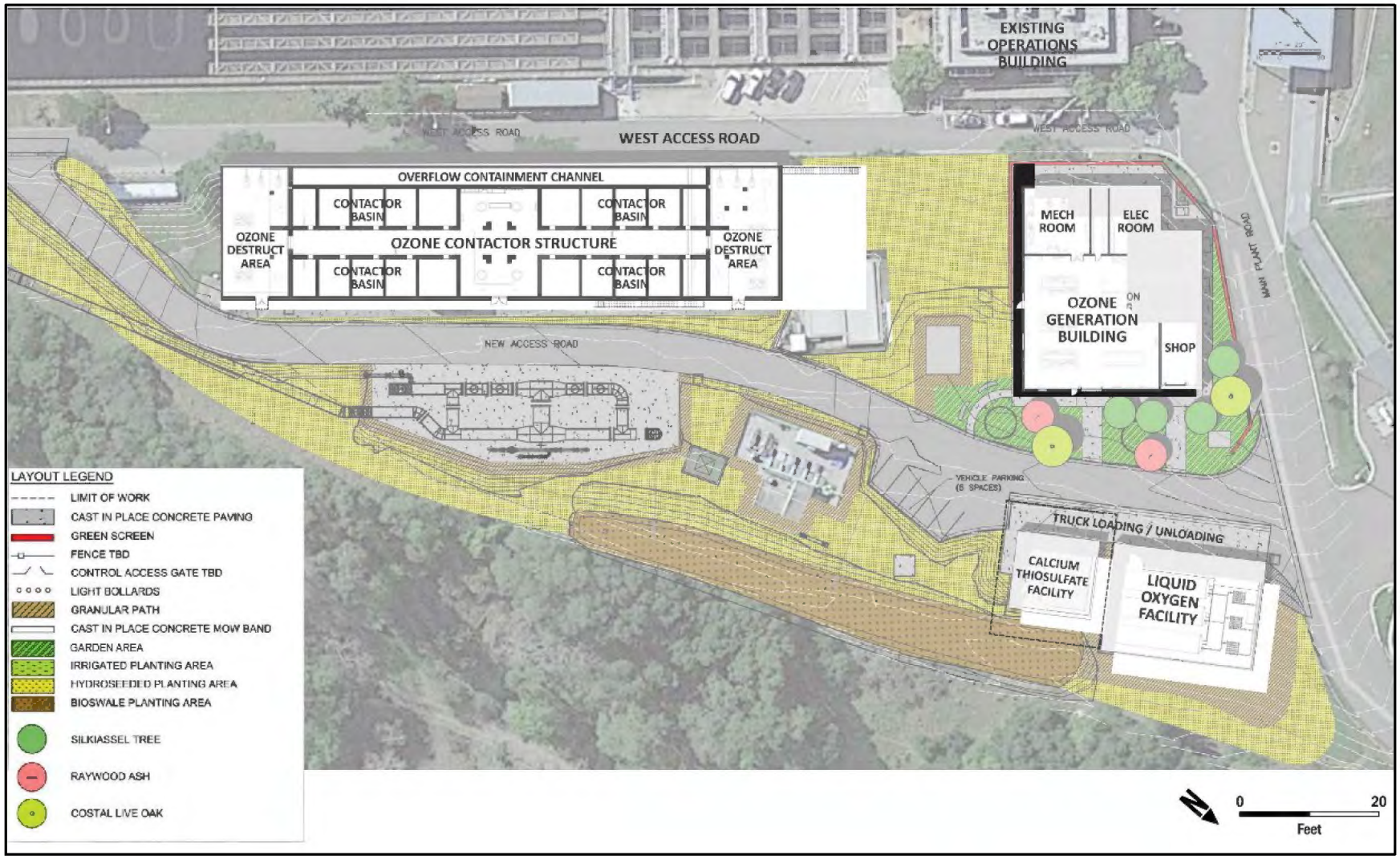


Figure 5: Proposed Modified Project Components at San Antonio Pumping Station

Figure 6: Ozonation Facility Site Plan



Source: CDM Smith

Figure 7 shows the renderings of the proposed new ozonation facilities, which include the following:

- **Liquid oxygen and nitrogen facility.** This facility would include three storage tanks and vaporizers for liquid oxygen and one storage tank for liquid nitrogen. Three 15,000-gallon horizontal storage tanks, each 40 feet long and 9.6 feet in diameter, would hold liquid oxygen. The three vaporizers would be approximately 6 feet by 6 feet square, and approximately 20 feet high. One 1,500-gallon storage tank, measuring 15 feet high and 5.6 feet in diameter, would hold liquid nitrogen. The tanks would be on an approximately 4,000-square-foot concrete foundation and surrounded by a security fence. The maximum height of the facility above the ground surface would be approximately 26 feet.

- **Ozone generation building**. This approximately 9,000-square-foot structure would house the ozone generators, power supply units, and ancillary mechanical and electrical equipment for the ozone system. Solar panels would be installed on the roof of the building, which would have a low slope with parapet walls. This building would also include a mechanics shop, a restroom, a supervisory control and data acquisition workstation room, a janitor's closet, and a storage room. The building would have a maximum height of approximately 24 feet. A cooling water pump station would be constructed next to the ozone generation building to supply open-loop cooling water to the ozone generation system.

- **Ozone contactor structure**. This approximately 18,000-square-foot concrete facility would consist of four ozone contactor basins and a gallery. Equipment to remove ozone off-gas would also be in this structure. The structure would have a maximum height of approximately 28 feet.

- **Raw Water Manifold.** This approximately 10,000-square-foot concrete slab would consist of an array of 12-inch to 96-inch steel piping connected and designed primarily to route the two 66-inch source water supply pipelines to the four contactor basins across at the ozone contactor structure.

- **Calcium thiosulfate facility**. This approximately 1,500-square-foot steel-frame structure would include a 5,400-gallon storage tank, metering pumps, and other ancillary equipment that would be used to neutralize ozone residual at the outlet of the ozone contactor basins. This facility would have a maximum height of approximately 24 feet.

The ozonation facility would include life-safety systems to:

- monitor ambient oxygen and ozone concentrations in the ozone generation room;

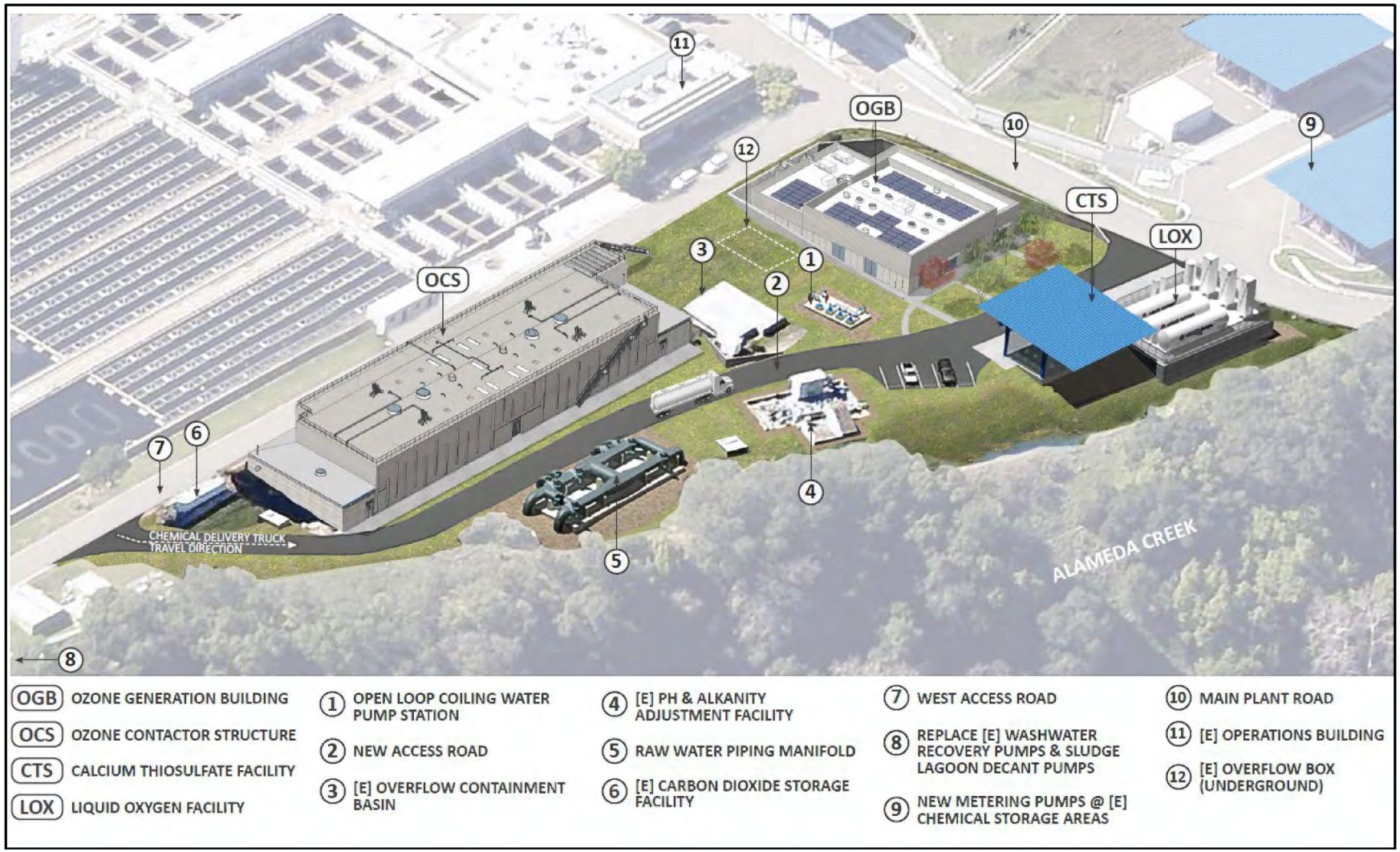
- continuously display data from these systems locally and through supervisory control and data acquisition;

- sound alarms using horns and beacons in various rooms in the event of a leak detection;

- provide automatic or manual shutdown of the ozone and oxygen systems; and

- control the ventilation systems in the ozone generation room and the ozone contactor galleries in the event of elevated ozone and/or oxygen levels.

Figure 7: Rendering of Proposed Ozonation Facility



Source: CDM Smith

In addition, SFPUC proposes the following site improvements at the plant associated with the proposed ozonation facility:

- A new paved access road would be constructed in the ozonation facility site to provide access to the ozonation facilities. This road would branch off of the plant access road (Main Plant Road), run generally north to south between the ozonation facilities, and connect with the West Access Road near the southern end of the plant.
- Five new parking spaces would be provided south of the new calcium thiosulfate facility.
- New yard piping would be installed and modifications would be made to existing yard piping to clear space for new structures, route raw water in and out of the ozone contactor basins, convey treatment chemicals (e.g., oxygen, ozone, calcium thiosulfate), and convey other water services (e.g., washwater, stormwater, sanitary sewer, potable water). This would include a new chemical pipe trench and piping with connection to an existing sodium hypochlorite and aqua ammonia chemical storage area. The trench would be reinforced concrete, and would be approximately 150 feet long, 2 feet wide, and 3 to 6 feet deep.
- New sodium hypochlorite and aqua ammonia metering pumps would be added to the existing storage and feed areas for those two chemicals near the chlorine contact tanks. The new metering pumps would be used for prechloramination addition to the proposed ozone contactor basins to mitigate bromate formation when needed.
- Three existing washwater recovery pumps would be replaced with larger-horsepower pumps to deliver recycled flows to the ozone contactors under higher hydraulic gradeline conditions.
- The existing electrical power supply would be modified to tie-in the new ozone system (see the Off-Site Electrical System Upgrades section below). The ozone facility's programmable logic controllers would be tied into the plant's existing supervisory control and data acquisition control network fiber ring.
- An existing 80-foot-high radio tower at the plant in the footprint of the proposed ozonation facility would be demolished and replaced with a new tower that would be installed to the north of the existing washwater tank. The new radio tower would stand on a 15-foot by 15-foot concrete pad and extend approximately 120 feet above ground surface. Conduit would be installed from the tower in a new underground 13-inch-wide by 8-inch-high concrete-encased ductbank connecting to an existing underground conduit adjacent to the curb of the asphalt road that accesses the washwater tank. The trench excavated for installation of the duct bank would be approximately 140 feet long, 2 feet wide, and 3 feet deep.
- One 21-kilovolt transformer mounted on a 15-foot-long by 15-foot-wide concrete pad near the proposed new Ozonation Building.
- Replacement of a sanitary holding tank, manholes, and piping.

- Installation of stormwater catch basins, manholes, and piping.
- Utility relocations and installation of landscaping and sidewalks.
- Installation of a new emergency backup generator to provide power to emergency and life-safety systems in the plant. The generator would be mounted on a 14-foot-wide by 23-foot-long concrete pad with a retaining wall around three sides.
- A bioswale along a portion of the eastern side of the ozonation facility and planting of replacement trees.

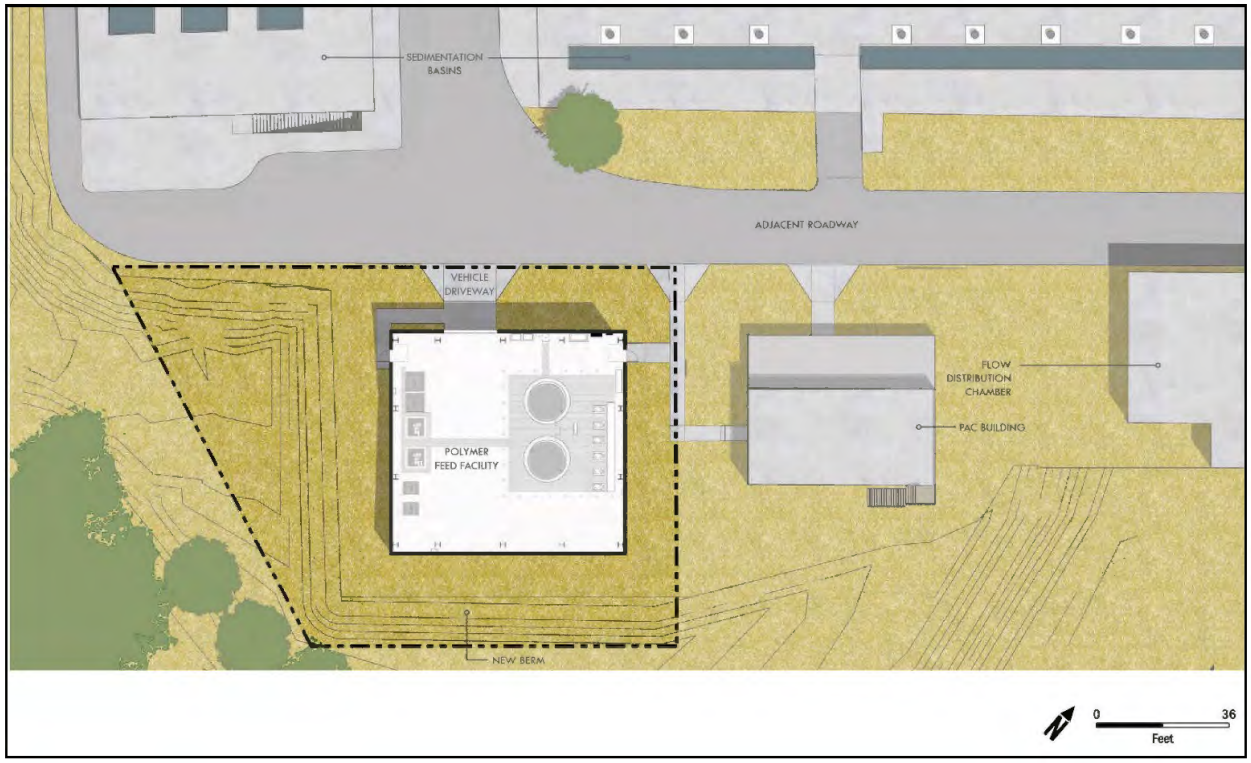
Construction of the ozonation system would require the demolition of existing trailers and storage sheds, equipment, and utilities in this location. Approximately 30 existing trees would be removed. Grading would be required at the locations of all proposed structures. The maximum depth of excavation is approximately 12 feet below ground surface for structures. A manhole and 18-inch stormwater drainpipe would require an excavation of about 365 feet in length, ranging 2.5 to 7 feet in depth, to tie into the existing stormwater drainage system. Pile driving would be required to install the ozone contactor structure's temporary shoring to a depth of approximately 14 feet below ground surface. Permanent drilled piers would be installed to depths of 35 feet below the raw water manifold slab and 40 feet below the ozone contactor structure. Total excavated soil is estimated to be approximately 15,000 cubic yards. The contractor would test and dispose of soil at an appropriate landfill or other location, if determined to be suitable for reuse. Some excavated soil may be used on site as fill, if acceptable based on testing results.

Polymer Feed Facility

SFPUC would construct a new polymer feed facility on the southern end of the plant to address turbidity issues during high flow rates at each of the five sedimentation basins. **Figure 3** shows the location of the proposed polymer feed facility, which would be sited in a previously disturbed area at the plant immediately west of the existing powder-activated-carbon facility. **Figure 8** shows the site plan, and **Figure 9** shows a rendering of the proposed polymer feed facility.

The proposed polymer feed facility would consist of an approximately 3,500-square-foot, approximately 30-foot-high, steel-frame building constructed on a 58-foot-long, 61-foot-wide, and 2-foot-deep concrete pad. The building would house polymer blending units, batch tanks, tank and tote mixers, and polymer feed pumps. A 4-foot-wide sidewalk would be constructed at the building frontage and would wrap around either side of the building for approximately 10 feet. A new driveway would extend from the existing paved adjacent roadway in the plant to the front of the building to meet the proposed 4-foot-wide sidewalk. The new facility would also have a 3-foot-wide drainage swale around the facility (labeled as "new berm" in Figure 8) that would be constructed from the roadway on the western side of the proposed facility, around the southern side of the building, and then connecting to the existing site drainage system.

Figure 8: Polymer Feed Facility Site Plan



Source: SFPUC

Figure 9: Polymer Feed Facility Rendering

The facility site would be cleared, grubbed, and graded to the same elevations as the existing and adjacent powder-activated-carbon facility, requiring approximately 3,900 cubic yards of excavation. Once graded, the facility would be constructed on a concrete pad supported by 24-inch-diameter piles that would be drilled into place and extend down to 25 feet below ground surface. Because of access required by SFPUC personnel at the treatment plant, the roadways in front of the construction area cannot be blocked, making it necessary to include a temporary work area up to 0.4 acre in size adjacent to the facility for materials storage (see Figure 3). The primary equipment and materials storage area would be at the former tree nursery site north of the treatment plant. To connect to existing utilities, an approximately 30-foot-long, 2-foot-wide, and 5-foot-deep trench would be excavated between the new facility and the existing utility lines near the existing sedimentation basins in a developed area of the plant.

Although no trees would be removed, there may be the need to conduct vegetation and tree trimming on the southern side of the facility.

Upgrades to Existing Water Treatment Facilities at the Sunol Valley Water Treatment Plant

In addition to the proposed new ozonation and polymer feed facilities, the modified project proposes the following repairs and upgrades to existing water treatment facilities at the plant:

- **Flocculation Basin**: Perform concrete surface and crack repairs, replace lower mud valve stem supports, and replace inlet baffles and bird netting.
- **Sedimentation Basin**: Perform concrete surface and crack repairs, standardize process pipe from basin outlet to pump discharge, install new flow meters at each pump discharge, incorporate sludge collection system electrical upgrades, and repair specified expansion joints in the water channel. In addition, replace the following items: bird netting, sludge level indicators and associated controls, remote verification sensors, scraper wear strips, cross collector augers and drives, and sludge pumps.
- **Filter Valves:** Replace the inlet, waste valves, and electric actuators; and remaining carbon steel surface wash water piping in filter bays. In addition, replace manually operated filter bank isolation with manual rectangular butterfly valves, and replace all the electric actuated individual air to filter half isolation valves with high performance butterfly valves made of stainless steel.
- **Cationic Polymer Feed System.** Demolish metering pumps and piping, concrete pads, concrete curb corroded electrical conduits and wiring; relocate reduced pressure principal backflow preventer and tank and level alarm panel; install new pumps and piping, expanded containment area, control panel, and electrical conduits and wiring.
- **Chemical Piping.** Construct new chemical pipe trench and piping with connection to an existing segment. The trench would be reinforced concrete, approximately 370 feet long, 4 feet wide, and 2 to 6 feet deep.
- **Filter Air Scour Piping.** Replace all filter air scour piping with new stainless-steel groove-coupled 16-inch steel air scour piping, valves, and respective actuators.
- **Settled Water Conduit.** Repair the settled water conduit leakage.

With the exception of the new chemical pipe trench, these improvements would occur in existing aboveground treatment facilities and would not involve any ground disturbance.

Off-Site Electrical System Upgrades

Operation of the proposed ozonation facility would increase loads on the existing Calaveras Substation main transformer that supplies power to the plant through the 21-kilovolt overhead electrical distribution line. To prevent overload conditions, the following equipment would be installed:

- Two automatic voltage regulators with bypass switches on the 21-kilovolt overhead distribution line: one in the former tree nursery area north of the plant, and one just north of the chloramination building at the San Antonio Pump Station. Each automatic voltage regulator would be mounted on a 16-foot-long by 16-foot-wide concrete pad. Each bypass switch would be mounted on a 12-foot-long by 15-foot-wide concrete pad adjacent to the voltage regulators. The overhead lines would be cut, routed down to the voltage regulator, and routed back up to the overhead line.
- One automatic voltage regulator inside an existing building at the San Antonio Pump Station.
- One power factor correction capacitor equipment panel mounted on a 20-foot-long by 6-foot-wide concrete pad for four pumps at the San Antonio Pump Station. Conduits from the equipment panel to the existing pumps would be routed a distance of 20 feet inside a 20-inch-square duct, including excavating a distance of approximately 8 feet beneath the existing 66-inch Calaveras Pipeline. To install the duct and conduit under the pipeline, approximately 30-square-foot pits would be excavated on each side of the pipeline to a depth of approximately 10 feet, and the conduit alignment under the pipeline would be excavated by hand.

Construction of the concrete pads for the exterior equipment would require excavation to a depth of 3 feet below ground surface. In total, the off-site electrical improvement would involve excavation of approximately 150 cubic yards of soil. Limited tree trimming or removal may be required for installation of the power factor correction capacitor equipment panel at the San Antonio Pump Station.

CONSTRUCTION EQUIPMENT, TIMING, AND STAFFING

Modified project construction activities include demolition/removal and disposal of both organic waste (trees/shrubs) and structural demolition waste (buried pipes, concrete vaults, manholes, two trailers, and at-grade concrete slabs); excavation; grading; trenching; pile driving for temporary shoring installation; drilling permanent foundation piles and piers; and construction of buildings and concrete structures.

Construction Equipment

Table 1 shows the equipment required for construction of the modified project.

Table 1: Construction Equipment and Usage

Equipment Description	Quantity	Purpose	Usage for/Duration			
			Ozonation Facility	Polymer Feed Facility	Repairs and Improvements to Existing Treatment Facilities	San Antonio Pump Station
45-ton crane	1	Set radio tower/antenna	2 weeks	NA	NA	NA
110-ton crane	1	Lift pipes, concrete formwork, equipment, etc. into place for construction	3 years	4 months	2 months	NA
Track-mounted crane	1	Set rebar cages and formwork for drilled piers	6 months	2 months	NA	NA
Drill rig/auger	1	Drill for piers beneath structures	6 months	2 months	NA	NA
Pile Driver	1	Install temporary shoring	2 weeks	NA	NA	NA
All-terrain forklift w/boom	3	Unload equipment/supplies, lift/place materials, set equipment, move materials around site	3 years	6 months	1 year	3 months
Track Excavator	2	Excavate for structures	2 years	2 months	2 months	NA
Flatbed Truck	2	Move equipment and materials around the site	3 years	1 year	1 year	3 months
Dump Trucks (end dump)	12	Haul off spoils, haul in fill and roadbase material, haul in asphalt paving material	2 years	2 months	2 months	1 month
Paver	1	Place asphalt paving on new and existing roadways	1 month	1 month	1 month	NA
Roller compactor (smooth drum)	2	Compact asphalt pavement, compact base material beneath structures	4 years	2 months	1 month	1 month
Backhoe	3	Excavate trenches, move materials, rough grading	3 years	6 months	2 months	3 months
Sheep's foot compactor	1	Compact sub-base material beneath structures	4 years	2 months	1 month	1 month

Equipment Description	Quantity	Purpose	Usage for/Duration			
			Ozonation Facility	Polymer Feed Facility	Repairs and Improvements to Existing Treatment Facilities	San Antonio Pump Station
Concrete Truck	12	Haul Concrete for construction of structures and pipe supports from batch plants to site	3 years	6 months	1 year	1 month
Concrete pump	2	Pump concrete for constructing structures	3 years	6 months	1 year	NA
Diesel generator (portable)	3	Temporary power during construction	3 years	8 months	2 years	3 months
Curb machine	1	Place concrete curb and gutter	2 months	1 month	NA	NA
Wire pulling machine	1	Pull wires and cables through conduit	2 years	6 months	6 months	1 month
Crew Vehicles	15	Transport crews and small tools around site during construction	4 years	18 months	3 years	3 months

Construction Timing

The ozonation facility construction work is anticipated to begin in March 2024 and be completed in approximately four years. Construction activities would primarily be conducted between 7 a.m. and 7 p.m. Monday through Friday, and as necessary, between 8 a.m. and 5 p.m. Saturday and Sunday, in accordance with the Alameda County Noise Ordinance. Weekend work may occasionally be required during critical periods such as concrete pours or during shutdowns to tie into existing facilities.

The polymer feed facility construction work is anticipated to commence in July 2025 and would be completed in approximately 18 months. Work would primarily be conducted between 7:00 a.m. to 7:00 p.m., Monday through Friday, and as necessary, between 8 a.m. and 5 p.m. Saturday and Sunday. Weekend work may occasionally be required during critical periods such as concrete pours or during shutdowns to tie into existing facilities.

Construction for repairs and improvements to existing treatment facilities is anticipated to begin May 2024 and be completed by May 2027 (three-year duration). Construction activities would typically occur between the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday, and as necessary, between 8 a.m. and 5 p.m. Saturday and Sunday. Weekend work may occasionally be required during critical periods such as concrete pours or during shutdowns to tie into existing facilities.

Construction Staffing

Construction of the ozonation facility would involve a daily average number of between 30 and 40 workers. The maximum number of workers on any one day is estimated to be between 100 and 120 people.

Construction of the polymer feed facility would involve a daily average number of between 12 and 15 workers. The maximum number of workers on any one day is estimated to be around 20 to 25 people.

Crew size for the proposed repairs and improvements to existing treatment facilities would average 15 people per day, with a maximum of 25 people.

Crew size for construction at the San Antonio Pump Station would average three people per day, with a maximum of eight people.

During months of concurrent construction for the ozonation facility, polymer feed facility, existing treatment facility repairs, and electrical improvements at the former tree nursery site and San Antonio Pump Station, the maximum number of workers on site would be 180.

CONSTRUCTION SITE ACCESS AND STAGING

Access to the modified project area would be via State Route 680 and Calaveras Road. Staging areas would be accommodated in the construction sites and the former tree nursery site to the north of the plant, shown on Figure 4. Construction of the polymer feed facility would require a 0.4-acre staging area adjacent to the construction site to avoid blocking access to the treatment plant by operations personnel. The staging areas would be used for construction trailers, storage of materials, construction vehicles, equipment, and to stockpile excess materials not reused on site. No grading is

anticipated for staging activities; however, the contractor would clear staging areas of vegetation, place weed fabric and gravel on the ground surface, and install temporary fencing and gates. After the completion of construction, the temporary fencing and gates would be removed, and the gravel would be removed at the polymer feed facility staging area but left in place at the former tree nursey site.

DEMOLITION, EXCAVATION, STOCKPILING, DISPOSAL OF SPOILS, AND VEHICLE TRIPS DURING CONSTRUCTION

Construction of the modified project would require demolition of five structures, clearing (e.g., removal of vegetation), excavation, and fill for various project components. For the ozonation facility, the estimated quantity of organic waste to be removed is approximately 1,950 cubic yards, and the estimated quantity of inorganic waste to be removed is approximately 250 cubic yards. The polymer facility is expected to remove approximately 240 cubic yards of organic waste. The proposed existing treatment plant facility improvements would generate approximately 120 cubic yards of nonhazardous waste. As shown in **Table 2**, the total modified project excavation volume would be approximately 19,290 cubic yards. Accounting for expansion factor when soils are no longer compacted, the estimated export volume of excavated soils would be approximately 25,080 cubic yards. Soils would be reused as backfill for proposed improvements as needed if they meet design specifications based on testing results, or properly disposed of off-site if contaminated or not needed for backfill, in accordance with all applicable local, state, and federal regulations governing solid waste disposal. Debris removed from the work area would either be recycled, or disposed of properly off site.

Table 2: Total Soil Excavation Volumes

Component	Excavation Volume (cubic yard)	Import Volume (cubic yards)	Export Volume (cubic yards)[1]
Ozonation Facility	15,000	4,000	19,500
Polymer Feed Facility	3,900	NA	5,070
Repairs and Improvements to Existing Treatment Facilities	220	6	290
Electrical Upgrades at Former Nursery Site and San Antonio Pump Station	170	5	220
Total	**19,290**	**4,011**	**25,080**

Note:

[1] Export volumes account for expansion of excavated soils when they are loaded uncompacted into trucks for hauling, and conservatively assume no reuse of soils for backfill on site.

Vehicle trips would include arrival and departure of construction workers, delivery of equipment and construction materials, haul trips to supply imported fill, and haul trips to remove organic waste,

demolition waste, and excavated soil. **Table 3** provides the maximum one-way trips per day for these activities using 20-cubic-yard capacity trucks for haul trips.

Table 3: Maximum One-Way Construction Trips Per Day

	Maximum Trips Per Day[1]			
Trip Type	**Ozonation Facility**	**Polymer Feed Facility**	**Repairs and Improvements to Existing Treatment Facilities**	**Electrical Upgrades at Former Nursery Site and San Antonio Pump Station**
Worker	240	50	50	20
Delivery	200	10	10	10
Haul	80	20	2	2
Total	**520**	**80**	**62**	**32**

Note:

[1] Presented numbers are one-way trips; round-trip numbers would be half of those presented. For example, the maximum number of workers for the ozonation facility on any one day would be 120, resulting in 240 one-way commute trips or 120 round trips.

SFPUC STANDARD CONSTRUCTION MEASURES

SFPUC has adopted *standard construction measures*, which are included in all SFPUC construction contracts and are to be implemented during the construction of every SFPUC project (see Appendix A).[11] The main objective of these uniform measures is to minimize or avoid significant impacts on existing resources to the extent feasible. They include activities such as early identification of sensitive environmental resources in the modified project area, and implementation of traffic control measures to maintain traffic and pedestrian circulation affected by construction. The SFPUC project manager, environmental project manager, and construction contract manager would ensure compliance with these requirements.

SPECIAL CIRCUMSTANCES DURING CONSTRUCTION

The SFPUC would use water for dust suppression in the work areas, where needed. The amount of water would vary depending on road surface and weather conditions, including temperature, wind speed, and other site-specific conditions.

POST-CONSTRUCTION, RESTORATION ACTIVITIES

On completion of all work, the disturbed areas at the plant and San Antonio Pump Station without new surface components (i.e., grasslands) would be restored to its general preconstruction conditions, including regrading of the site and revegetation of disturbed areas, in accordance with the

[11] SFPUC (San Francisco Public Utilities Commission), 2015. SFPUC Standard Construction Measures. Harlan L. Kelly, Jr., General Manager, July 1.

SFPUC Standard Construction Measure 8 (Visual and Aesthetic Considerations).[12] Specifically, the contractor would seed or hydroseed with the pre-approved native grass seed mix, and stabilize any disturbed area with best management practices (e.g., silt rolls on slopes) to support revegetation. At the former tree nursery site, gravel placed for construction staging use would remain after construction to maintain this area for potential future staging use, and no revegetation would occur.

OPERATIONS

Plant Facilities

Operation of the ozonation and polymer feed facilities would involve an increase in electrical energy consumption, an increase in regular delivery of chemicals used in these systems, and occasional deliveries of spare parts for repairs.

Operational Staff: Under the modified project, the SFPUC would operate the ozonation facility approximately 180 days per year. Most of the operation time would be at a low rate; operation of the ozonation facility at a high rate would occur approximately 45 days of the 180 days. The plant's nine existing staff would be sufficient to cover operations and maintenance of the ozonation facility; no additions to existing staffing levels are proposed by the modified project.

The polymer feed facility would operate intermittently; for approximately 60 to 90 days per year. The current operations staff at the plant would operate the flocculant aid polymer system, and no additional staff are proposed.

Operational Water Needs: The modified project treatment processes—the ozonation facility and polymer feed facility—would not consume potable water. For the ozonation facility, water for chemical mixing, carriage water, and cooling water would be obtained from and returned to the main process flow. Similarly, the polymer feed facility would use water from the plant's process flow system for mixing and transmitting the mix to the flow distribution structure. The only new incidental usage of potable water proposed by the modified project would be for the ozone generation building restroom and approximately 11 new emergency eyewash safety showers.

The proposed repairs and improvements to existing treatment facilities would not add any new processes, and therefore would not consume any additional potable water.

Operational Electrical Demand: The ozone system addition to the plant would require an estimated 2,000 kilovolt-amperes of electrical power to operate the various components and building auxiliaries. For the polymer feed facility, added electrical load to this new facility when operating is expected to be a 75 kilovolt-amperes new connected load. Electrical improvements are included as part of the modified project to accommodate estimated demand increases. No additional operational electrical demands would be required for the proposed repairs and improvements to existing treatment facilities.

[12] Ibid.

New Plant Chemical Deliveries: The chemical deliveries for the ozone system would consist of liquid oxygen, liquid nitrogen, and calcium thiosulfate. The proposed liquid oxygen tanks are sized to provide six days of storage at the maximum ozone production rate (max flow and max dose), and 36 days at average ozone production rate (average flow and average dose); at average production, operation of the ozone system would use approximately 540,000 gallons of liquid oxygen per year. The proposed liquid nitrogen tank is sized to provide seven days of storage at the maximum ozone production rate (maximum flow and maximum dose), and 30 days of storage at average ozone production rate (average flow and average dose); at average production, operation of the ozone system would use approximately 18,000 gallons of liquid nitrogen per year. The proposed calcium thiosulfate tank is sized to provide four days of storage at the maximum ozone production rate (maximum flow and maximum dose), and 63 days of storage at average ozone production rate (average flow and average dose); at average production, operation of the ozone system would use approximately 32,000 gallons of calcium thiosulfate per year. Based on maximum flow operating conditions, there would be up to 18 additional delivery trips per month to the plant for operation of the ozonation facility.

Operation of the new polymer feed facility would require the addition of a chemical (flocculant aid polymer) to the plant's existing treatment process to address turbidity issues in the sedimentation and flocculation basins at mid-to-high flow rates. The polymer feed facility would minimally increase the existing plant vehicle deliveries depending on the flow rate when running. The required chemical totes would have seven days of storage at the maximum flow rate, and up to 90 days at the average flow rate. Given that this facility is expected to run a total of two to three months per year and would typically operate at minimum to average flows, it is not anticipated that this would add any appreciable increase in vehicle deliveries at the plant.

Stationary Generators or Equipment: The modified project proposes a new 150-kilowatt backup generator with a 350-gallon diesel fuel tank to provide power to emergency and life-safety systems in the plant; the emergency generator would run a total of approximately 50 hours per year. The polymer feed facility would not require the need for stationary generators or other equipment that would result in harmful pollutant emissions.

Operational Water Discharges: For the ozonation facility, water discharges would only occur in the event of a system of valve malfunction, such that water at the ozone contactor structure rises to overflow from the basins, and the cause of the overflow is not corrected before the volume of overflow exceeds the capacity of the overflow containment channel. The water would be drained through the existing discharge pipe, which has an outfall to Alameda Creek, as authorized by the State Water Resources Control Board Statewide National Pollutant Discharge Elimination System Permit for Drinking Water System Discharges to Waters of the United States (Order WQ 2014-0194-DWQ, General Order CAG140001).

No water discharges are anticipated as part of operation of the polymer feed facility, nor from the proposed repairs and improvements to the existing treatment facilities.

Former Tree Nursery Site

Gravel placed for construction staging use at the former tree nursery site would remain after construction to maintain this area for staging use by SFPUC for future construction projects at the plant or other SFPUC facilities in the area. For example, the planned Long Term Improvements Project for the plant would likely use this area for staging.

Modified Project Approvals

The San Francisco Public Utilities Commission would consider approval of the Modified Project at a public hearing.

CEQA Approach

San Francisco Administrative Code section 31.19(c)(1) states that a modified project must be reevaluated, and that "If, on the basis of such reevaluation, the Environmental Review Officer determines, based on the requirements of the California Environmental Quality Act (CEQA), that no additional environmental review is necessary, this determination and the reasons therefore shall be noted in writing in the case record, and no further evaluation shall be required by this Chapter." CEQA Guidelines section 15164 provides for the use of an addendum to document the basis for a lead agency's decision not to require a subsequent EIR for a project that is already adequately covered in a previously certified EIR. An addendum to a certified EIR may be prepared if some changes or additions are necessary, but none of the conditions described in section 15162 calling for the preparation of a supplemental or subsequent EIR have occurred.

This addendum evaluates the potential environmental effects of the proposed modifications, herein referred to as the "modified project," relative to the impacts of the "approved project" as disclosed in the EIR. The EIR for the approved project found that implementation of the project would not result in project-specific significant environmental effects that could not be mitigated to a less-than-significant level with implementation of mitigation measures, with the exception of those associated with greater Water System Improvement Program.[13] Since adoption, other than as explained and discussed in this addendum, no changes have occurred in the project or in the circumstances under which the approved project would be undertaken, and no new information has emerged that would materially change any of the analyses or conclusions of the certified EIR.

One change since the certification of the Final EIR is the consideration of SFPUC's standard construction measures in evaluating the environmental effects of the modified project. SFPUC previously established construction measures in 2007 for application to Water System Improvement Program projects. The 2007 standard construction measures were mentioned in the EIR's project description for the approved project but were not described in detail or considered in the EIR's analysis. The standard construction measures were updated in 2015, and are required for all SFPUC construction projects.[14] In addition to complying with all applicable local, state, and federal laws and

[13] Because the approved project was part of the Water System Improvement Program, the Final EIR found that it would contribute to significant and unavoidable impacts on: 1) stream flow in Alameda Creek between the diversion dam and the confluence with Calaveras Creek; 2) fishery resources in Crystal Springs Reservoir in San Mateo County; and 3) growth in the San Francisco Public Utilities Commission service area.

[14] SFPUC, Standard Construction Measures. Harlan L. Kelly, Jr., General Manager, July 1, 2015.

regulations, these measures are mandatory in the execution of every SFPUC project. These measures are included in all SFPUC construction contracts and are monitored for compliance. Because these measures are required for all SFPUC projects, implementation of these measures is considered part of the regulatory framework for the evaluation of environmental impacts of the modified project. The 2015 *standard construction measures* were not approved at the time of the preparation of the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR, and therefore were not considered in the analysis presented in the EIR. With implementation of the 2015 standard construction measures, some impacts that were considered to be potentially significant for the approved project were found to be less than significant for the modified project, as described in the following analyses. In these instances, the mitigation measures for the approved project would not be required to reduce the impacts of the modified project to a less-than-significant level.

For the reasons discussed below, the modified project would not result in any substantial changes that would require major revisions to the certified EIR, nor would new significant environmental effects or a substantial increase in the severity of previously identified significant effects occur. As analyzed below, many of the construction-related impacts of the modified project would be similar (but lesser in scale) to those identified for the approved project. No new mitigation measures would be needed. Therefore, no additional environmental review is necessary beyond this addendum.

CUMULATIVE DEVELOPMENT

CEQA Guidelines section 15130(b)(1)(A) defines cumulative projects as past, present, and probable future projects producing related or cumulative impacts. CEQA Guidelines section 15130(b)(1) provides two methods for cumulative impact analysis: the "list-based approach" and the "projections-based approach." The list-based approach uses a list of projects producing closely related impacts that could combine with those of a proposed project to evaluate whether the project would contribute to significant cumulative impacts. The projections-based approach uses projections contained in a general plan or related planning document to evaluate the potential for cumulative impacts. This project-specific CEQA analysis employs the list-based approach to the cumulative impact analysis. Due to the nature and location of this project, a projections-based approach was not considered. **Table 4** presents an updated list of current or future projects considered in the analysis of cumulative impacts for the modified project.

The specific approach to the cumulative analysis is discussed in each topical subsection of this addendum. This includes projects that have an application on file with the relevant jurisdictions.

Table 4: Cumulative Projects

Project Name	Description	Estimated Construction Period	Location
State Route 84 (SR-84) and SR-84/ Interstate 680 (I-680) Interchange Improvements	Improve SR-84/I-680 interchange ramps; and extend the existing I-680 southbound express lane northward by two miles	May 2021 – Winter 2024/ 2025	3 miles north of the plant
Sunol Valley Water Treatment Plant Long Term Improvements Project	Upgrades to existing plant facilities, including improvements to the Administration building, upgrades and repairs of existing equipment and plant systems, and minor roadway widening	2027-2028	At the plant

Analysis of Environmental Effects

Cultural and Paleontological Resources

SUNOL VALLEY WATER TREATMENT PLANT EXPANSION AND TREATED WATER RESERVOIR PROJECT EIR FINDINGS

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR found that the approved project would have potentially significant impacts related to the following significance criteria regarding cultural and paleontological resources:

- Causing a substantial adverse change in the significance of a historical or unique archeological resource pursuant to Section 15064.5 of the CEQA Guidelines
- Directly or indirectly destroying a unique paleontological resource or site or unique geological feature
- Disturbing any human remains, including those interred outside of formal cemeteries

The EIR determined there were no historical architectural resources in or near the area of potential effect (APE) that could be affected by implementation of the approved project. Therefore, it concluded that the approved project would result in no impacts on historic architectural resources, and this criterion was not addressed further.

Archeological Resources

The EIR found that no archeological resources were recorded in the APE for the approved project and determined that implementation of Mitigation Measure M-CR-2 (Procedures to be Followed in the Event of an Accidental Discovery) would reduce any potentially significant impact on previously unrecorded archeological resources to a less-than-significant level.

Human Remains

The EIR also determined that although no known human burial locations were identified in the APE for the approved project, construction could result in direct impacts on previously undiscovered human remains during any earthmoving activities. The EIR concluded such impacts would be potentially significant, but implementation of Mitigation Measure M-CR-3 (Protection of Human Remains Encountered during Excavation Activities) would reduce impacts to a less-than-significant level.

Paleontological Resources

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR found that a substantial portion of the approved project site is situated immediately on alluvial and fluvial deposits of Pleistocene age, which are considered highly sensitive for paleontological resources. This included several project components at the plant that required excavation ranging from 20 to 80 feet deep, including the sedimentation and flocculation basin, wash water recovery basin, chlorine contact tank, and treated water reservoir. Earthwork in areas of Holocene substrate deep enough to involve underlying Pleistocene strata could also result in disturbance or loss of paleontological resources. The EIR concluded that this potentially significant impact on paleontological resources would be reduced to a less-than-significant level through implementation of Mitigation Measures CR-1a (Conduct Preconstruction Surveys for Significant Paleontological Resources in Areas of Undetermined and High Paleontological Sensitivity), CR-1b (Paleontological Resources Worker Awareness Training), CR-1c (Perform Preconstruction Surface Salvage of Any Significant Paleontological Resources Discovered), CR-1d (Conduct Paleontological Resources Monitoring during Construction in Areas of Undetermined and High Paleontological Sensitivity, as Required), and CR-1e (Stop Work if Known or Suspected Paleontological Resources Are Encountered, which require pre-construction surveys and monitoring by qualified specialists for activities affecting highly sensitive deposits, worker awareness training for construction personnel, and a "stop work" in the vicinity of fossil finds in any geologic unit, followed by evaluation by a qualified paleontologist and any appropriate treatment, potentially including excavation, recovery, and curation.

MODIFIED PROJECT IMPACTS

Historical Architectural Resources

The Historic Resources Evaluation[15] prepared for the modified project evaluated the individual historic-age (older than 50 years) buildings and structures at the Sunol Valley Water Treatment Plant, and the plant facility as a whole. The Historic Resources Evaluation concluded that neither the Sunol Valley Water Treatment Plant as a whole, nor any of the individual buildings and structures that comprise the facility are eligible for listing in the National Register or the California Register. No potential historical architectural resources are present in the APE at the former tree nursery or San Antonio Pump Station. As with the approved project, because no historical architectural resources are in the APE for the modified project, the modified project would have ***no impact*** on historic architectural resources.

[15] AECOM, Historic Resources Evaluation – Sunol Valley Water Treatment Plant, March 8, 2023.

Archeological Resources

A Historic Context and Archeological Survey Report[16] was prepared for the modified project, which included a records search and pedestrian survey of the modfied project's APE. The records search did not reveal the presence of known archeological resources in the APE, and no prehistoric and historic-era archeological resources were identified during the pedestrian survey of the the APE. The majority of the ground-disturbing activities for the modifed project would occur at the plant, with only limited ground disturbance occurring at the San Antonio Pumping Station and at the former tree nursery site. The plant, where project-related ground disturbance would occur at depths to 40 feet below ground surface, is situated on Pleistocene stream terrace deposits (Pleasanton soil series). These have very little potential to contain buried resources, because they pre-date the period of known human presence in the region. Therefore, the inadvertent discovery of archeological resources during construction at the plant is not anticipated.[17] The Holocene stream terrace deposits underlying the San Antonio Pump Station and southern portion of the former tree nursery site generally have an elevated potential for containing buried archaeological deposits; however, because ground disturbance would be relatively shallow (i.e., less than 12 feet deep) at these locations, the likelihood of exposing buried archeological resources or paleosols is low.[18] Nonetheless, the potential exists for accidental discovery of archeological resources during construction of the modified project. 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 modified project would not result in a substantial adverse impact on unknown archeological resources. As a result, the modified project's impacts on archeological resources would be ***less than significant***. Mitigation Measure M-CR-2 (Procedures to be Followed in the Event of an Accidental Discovery) identified for the approved project would not be required for the modified project because SFPUC Standard Construction Measure #9, Archeological Measure 1, requires measures equivalent to those outlined in Mitigation Measure M-CR-2 to address accidentally discovered buried cultural resources.

Human Remains

Similar to the approved project, although no known human burial locations have been identified in the APE for the modified project, construction could result in direct impacts on previously undiscovered human remains during any earthmoving activities. As stated above, SFPUC would require implementation of its Standard Construction Measure #9, Archeological Measure 1, which would require the SFPUC to notify the Alameda County Coroner, and adhere to appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition protocols in

[16] AECOM, Historic Context and Archeological Survey Report – An Archeological Survey for the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, May 2023.
[17] Ibid.
[18] Ibid.

the event human remains are encountered. As a result, this impact would be ***less than significant***. Mitigation Measure M-CR-3 (Protection of Human Remains in Encountered during Excavation Activities) identified for the approved project would not be required for the modified project because SFPUC Standard Construction Measure #9, Archeological Measure 1 requires measures equivalent to those outlined in Mitigation Measure M-CR-3 to address accidentally discovered human remains.

Paleontological Resources

Construction of the ozonation and polymer feed facilities would occur at the plant, which is situated immediately on alluvial and fluvial deposits of Pleistocene age that are considered highly sensitive for paleontological resources. Ground disturbance would occur to depths of 40 feet below ground surface for installation of piers for the ozonation facility, and 25 feet for the polymer feed facility. If earthwork in areas of Holocene substrate would be deep enough to involve underlying Pleistocene strata, this could result in disturbance or loss of paleontological resources, which would be a potentially significant impact. Implementation of Mitigation Measures CR-1a through CR-1e would reduce this potential impact on paleontological resources by requiring pre-construction surveys and monitoring by qualified specialists for activities affecting highly sensitive deposits, worker awareness training for construction personnel, and a "stop work" in the vicinity of fossil finds in any geologic unit, followed by evaluation by a qualified paleontologist and any appropriate treatment, potentially including excavation, recovery, and curation. With implementation of Mitigation Measures CR-1a through CR-1e, the modified project's impacts on paleontological resources would be ***less than significant with mitigation.*** These mitigation measures have been modified to reflect the proposed components of the modified project; deletions are shown in strikethrough and additions in double underline.

> **Mitigation Measure CR-1a – Conduct Preconstruction Surveys for Significant Paleontological Resources in Areas of Undetermined and High Paleontological Sensitivity**
>
> Before construction begins, the SFPUC shall retain a California Registered Professional Geologist with appropriate expertise or a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) to conduct a more detailed evaluation of potential paleontological resources in those areas of the project identified as undetermined or highly sensitive for paleontological resources, namely areas of Holocene, Pleistocene, which occur where the ozonation and polymer feed facilities ~~treated water reservoir, flocculation and sedimentation basin, wash water recovery basin, and chlorine contact tank facilities~~ would be constructed. The following shall be adhered to:
>
> - The evaluation shall include a thorough literature-based and field-reconnaissance survey of the highly sensitive and undetermined areas where surficial excavation activities are planned. The field survey shall be limited to identifying potentially significant features at the surface.
>
> - The evaluation shall be documented in a report to be submitted for review and approval by the SFPUC prior to the start of construction.

- If the evaluation and survey result in the discovery of a paleontological resource exposed at the surface or confirm the potential for impacts on significant paleontological resources, Mitigation Measures CR-1c and CR-1d shall also be implemented. Mitigation Measure CR-1a shall be implemented as a safeguard regardless of the identified likelihood of potential impacts.

Mitigation Measure CR-1b: Paleontological Resources Worker Awareness Training

Before construction begins, the SFPUC shall ensure that all construction personnel receive paleontological resources awareness training that includes information on the possibility of encountering fossils during construction; the types of fossils likely to be seen, based on finds in the site vicinity; and proper procedures in the event fossils are encountered. Worker training shall be prepared by a qualified paleontologist as defined by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee, 1995) or other appropriate personnel (e.g., California Registered Professional Geologist with appropriate expertise) experienced in teaching non-specialists.

Mitigation Measure CR-1c: Perform Preconstruction Surface Salvage of Any Significant Paleontological Resources Discovered

If a significant paleontological resource is discovered at the ground's surface as a result of pre-construction surveys conducted per Mitigation Measure CR-1a and cannot be avoided through exclusion of the area from project disturbance (e.g., through the installation of exclusion fencing), the SFPUC shall retain a California-Registered Professional Geologist with appropriate expertise or a qualified professional paleontologist as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) to salvage and treat the resource prior to construction in the immediate vicinity of the find. Salvage of the resource would include recovering the item and properly documenting, preparing, and curating the find. Treatment of the resource may include preparation and recovery of fossil materials for housing in an appropriate museum or university collection and may also include preparation of a report for publication describing the find. No construction activities at the location of the find shall be allowed until the salvage operation is completed and authorization is provided by the SFPUC.

Mitigation Measure CR-1d: Conduct Paleontological Resources Monitoring during Construction in Areas of Undetermined and High Paleontological Sensitivity, as Required

If determined necessary after implementation of Mitigation Measure CR-1a, the SFPUC shall retain a qualified paleontologist as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) to conduct on-site monitoring for unanticipated discovery of potentially significant paleontological resources during initial ground-disturbing activities (e.g., grading and excavation) in the areas with geological units identified as highly sensitive for paleontological resources and as field-verified by the qualified paleontologist. After initial ground disturbance activities in the paleontologically sensitive areas, monitoring shall cease but a paleontologist shall be retained on-call by the SFPUC throughout the project in the event of an unanticipated find during subsequent

construction activities. The monitor will have authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely, and/or recover fossils.

Mitigation Measure CR-1e: Stop Work if Known or Suspected Paleontological Resources Are Encountered

If fossil materials are discovered during any project-related activity, all ground-disturbing work within 50 feet of the find shall stop immediately until the paleontological monitor can assess the nature and importance of the find and recommend appropriate treatment. Recommendations for treatment shall be consistent with SVP guidelines (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee, 1995) and may include preparation and recovery of fossil materials so they can be housed in an appropriate museum or university collection.

Tribal Cultural Resources

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR did not analyze impacts on tribal cultural resources, because this topic was not mandated for inclusion under CEQA until 2016. As defined in Public Resources Code section 21074, a tribal cultural resource is either a site, feature, place, 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:

a) 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

b) 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 in 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.

The modified project would involve soil disturbance to depths of 1 to 40 feet below ground surface. Ground-disturbing activities therefore could damage tribal cultural resources, if present. As stated above, no known archeological resources or human burial locations are present in the modified project APE. As described above, during construction, SFPUC would require implementation of its Standard Construction Measure #9, Archeological Measure 1, which 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, potential impacts on tribal cultural resources would remain ***less than significant***.

Summary

No historical architectural resources are in or near the APE.[19] No known archeological resources or human burial locations are in the APE;[20] however, the potential for inadvertent discovery of resources

[19] AECOM, Historic Resources Evaluation – Sunol Valley Water Treatment Plant, March 8, 2023.

[20] AECOM, Historic Context and Archeological Survey Report – An Archeological Survey for the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, May 2023.

exists. In addition, the modified project involves construction in an area with high sensitivity for paleontological resources. With the SFPUC's required implementation of its Standard Construction Measure #9, Archeological Measure 1 to address accidental discovery of archeological resources and human remains, and Mitigation Measures CR-1a through CR-1e for paleontological resources, construction of the modified project would not result in new or substantially more severe significant impacts on cultural and paleontological resources greater than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR.

Cumulative

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR concluded that construction of the approved project would not alter any historical architectural resources as defined by CEQA and would therefore not contribute to a cumulatively considerable impact on historical architectural resources. Because the modified project would have no impact on historical architectural resources, it also would not contribute to cumulative impacts on historical architectural resources (***no impact***).

The EIR evaluated the cumulative impact on unknown archeological resources and human remains from the approved project in combination with other construction projects in the vicinity and found that significant cumulative impacts on archeological resources and human remains could result, and that the approved project's contribution to this impact could be cumulatively considerable (significant). However, the EIR concluded that, with implementation of mitigation measures, the project's contribution would be less than cumulatively considerable (less than significant). As with the approved project, construction of the modified project has the potential to encounter previously undiscovered archaeological resources and human remains. The Caltrans State Route 84 and SR-84/ Interstate 680 Interchange Improvements project and planned Long Term Improvement project at the plant could also encounter previously undiscovered archaeological resources and human remains during construction. Because the Caltrans project is more than 3 miles from the plant, it could not impact the same cultural resources and result in cumulative impacts. The Long Term Improvements Project would be located at the plant, could involve construction in the same areas as the modified project, and therefore could impact the same cultural resources resulting in cumulative impacts. However, with implementation of Standard Construction Measure #9, requiring the proper evaluation and treatment of archeological resources and human remains if encountered, the modified project's contribution to significant cumulative impacts on archeological resources and humans remains would be less than cumulatively considerable (***less than significant***). Further, Standard Construction Measure #9, Archeological Measure 1 would be similarly required for the Long Term Improvements Project. As noted above, the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR did not analyze impacts on tribal cultural resources, because this topic was not mandated for inclusion under CEQA until 2016. However, with implementation of Standard Construction Measure #9, Archeological Measure 1, which outlines protocols for addressing accidental discovery of archeological resources and human remains, including tribal consultation as appropriate, any cumulative impacts on tribal cultural resources would be ***less than significant***.

The EIR evaluated the cumulative impact on paleontological resources from the approved project's construction in combination with other construction projects in generally similar geologic settings

and found that significant cumulative impacts on paleontological resources could result, and that the approved project's contribution to this impact could be cumulatively considerable (significant). However, the EIR concluded that, with implementation of identified mitigation measures, the approved project's contribution would be less than cumulatively considerable (less than significant). As described above, the modified project site has high sensitivity for paleontological resources and could result in a significant impact on unique paleontological resources. The planned Long Term Improvements at the plant would involve upgrades to existing plant facilities and does not propose new facilities involving construction to depths with potential to contain paleontological resources. Although the State Route 84 and SR-84/Interstate 680 Interchange Improvements project is also in areas of paleontological sensitivity, it is more than 3 miles from the plant, and could not impact the same paleontological resources. Therefore, the modified project would not combine with reasonably foreseeable projects to result in cumulative impacts on paleontological resources.

In summary, the modified project would not result in new significant cumulative impacts on cultural and paleontological resources that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe impacts than those identified; and would not require new mitigation measures.

Biological Resources

SUNOL VALLEY WATER TREATMENT PLANT EXPANSION AND TREATED WATER RESERVOIR PROJECT EIR FINDINGS

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR found that the approved project would have potentially significant impacts on biological resources related to the following significance criteria:

- Having 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
- Having a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Having 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
- Interfering 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

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR identified two habitat conservation planning efforts: SFPUC Alameda Watershed Habitat Conservation Plan; and East Alameda County Conservation Strategy. However, at the time of preparation of EIR, neither of these plans had been completed or approved. Therefore, the following significance criterion was not evaluated in the EIR: *Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.* In addition, the Alameda County Tree Ordinance only applies to the County right-of-way. The approved project did not involve removal of trees in the Alameda County right-of-way, and the EIR did not evaulate the following signficance criterion: *Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

Special-Status Species

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR concluded that construction of the approved project could result in potentially significant impacts associated with temporary and permanent degradation or loss of habitat, disruption of movement patterns, and direct injury or mortality of California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Emys marmorata*), Alameda whipsnake (*Coluber lateralis euryxanthus*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), as well as resident trout and other native fish, and from the loss and disruption of habitat for nesting birds, raptors (including western burrowing owl [*Athene cunicularia ssp. Hypugaea*]), and bats. The EIR concluded that impacts to special-status species and their habitat from the approved project's construction and operation would be reduced to a less-than-significant level through implementation of Mitigation Measures BIO-1a (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel), BIO-1b (Install Wildlife Exclusion Fencing along the Perimeter of the Construction Work Area and Implement General Measures to Avoid Impacts to Special-Status Species and Sensitive Natural Communities), BIO-1c (Conduct Pre-Construction Surveys and Monitor Construction Activities for California Tiger Salamander, California Red-Legged Frog, Western Pond Turtle, and Alameda Whipsnake), BIO-1d (Prepare and Implement a Vegetation Restoration and Compensation Plan), BIO-1e (Compensate for Permanent Loss of Upland Habitat for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake), BIO-5 (Conduct Preconstruction Surveys for Active Burrowing Owl Burrows and Implement CDFG [California Department of Fish and Game/Wildlife] Guidelines for Burrowing Owl Mitigation, if Necessary), BIO-6 (Remove Trees and Shrubs during the Non-breeding Season [August 16–February 14] for Birds or Conduct Nesting Bird Surveys, and Establish No-Disturbance Buffers, as Appropriate), BIO-7 (Conduct Preconstruction Surveys for Sensitive Bats and Implement Avoidance and Minimization Measures if Found), BIO-10 (Conduct Pre-Construction Surveys for Dusky-footed Woodrat and Implement Avoidance and Minimization Measures if Found), HYD-1a (Construction Water Quality Best Management Practices), and HYD-1b (Management of Dewatering Effluent Discharges). Additionally, the EIR evaluated the approved project's construction impacts on San Joaquin kit fox (*Vulpes macrotis*) and American badger (*Taxidea taxus*), and determined that impacts on these species would be less than significant because the potential for these species to use the approved project site was considered low, and the potential habitat for these species affected by the approved project was of low quality. The EIR also determined that infrequent (every five years) discharges to Alameda Creek

that would occur during operation of the approved project would have less-than-significant impacts on special-status species.

Sensitive Habitats
The EIR determined that construction of the approved project would have potentially significant impacts related to degradation of riparian habitat, temporary removal of riparian habitat, and temporary and permanent removal of oak woodlands. However, with implementation of Mitigation Measures BIO-1a (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel), BIO-1b (Install Wildlife Exclusion Fencing along the Perimeter of the Construction Work Area and Implement General Measures to Avoid Impacts to Special-Status Species and Sensitive Natural Communities), BIO-1d (Prepare and Implement a Vegetation Restoration and Compensation Plan), and HYD-1a (Construction Water Quality Best Management Practices), these impacts would be reduced to a less-than-significant level.

Wetlands and Aquatic Resources
The EIR determined that impacts on federal and state jurisdictional waters from construction of the approved project would include permanent impacts on a small perennial spring wetland from partial removal of the wetland and altered hyrdology, temporary disturbance of an intermittent drainage, potential sedimentation of and accidental discharge of pollutants to Alameda Creek and to the perennial spring wetland, and potential discharge of groundwater encountered during excavation into Alameda Creek. The EIR concluded that implementation of Mitigation Measures BIO-1a (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel), BIO-1b (Install Wildlife Exclusion Fencing along the Perimeter of the Construction Work Area and Implement General Measures to Avoid Impacts to Special-Status Species and Sensitive Natural Communities), BIO-1d (Prepare and Implement a Vegetation Restoration and Compensation Plan), BIO-13 (Minimize Distrubance of Waters of the United States and Waters of the State, Including Wetlands), and HYD-1a (Construction Water Quality Best Management Practices) would reduce construction impacts on jurisdictional waters to a less-than-significant level.

Wildlife Movement and Migratory Corridors
The EIR determined that although the approved project construction area would be fenced and would exclude wildlife movement through the area during construction, extensive areas adjacent to the approved project site would allow common wildlife to traverse Sunol Valley during the construction period. The EIR also found that fish migration in Alameda Creek during the rainy season would not be affected by the approved project because construction did not include in-channel work. For these reasons, the EIR concluded that this impact would be less than significant.

MODIFIED PROJECT IMPACTS

A biological resources assessment[21] and biological resources assessment addendum[22] were prepared for the modified project to assess the presence of—or potential for—sensitive biological resources in

[21] AECOM, Biological Resources Assessment, Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, March 2023.
[22] AECOM, Addendum to Biological Resources Assessment for the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, April 21, 2023.

the modified project site. These studies included reconnaissance-level wildlife habitat suitability surveys, vegetation mapping, rare plant surveys, and a tree inventory for the modified project construction footprint and staging areas plus a 50-foot buffer around these areas (i.e., the biological study area). The biological resources assessment and associated addendum were used along with the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR to reach the significance determinations that follow.

As with the approved project, there are currently no approved habitat conservation plans applicable to the modified project site. The SFPUC Alameda Watershed Habitat Conservation Plan was not completed. The East Alameda County Conservation Strategy has not been adopted for the purpose of incidental take permit coverage for threatened or endangered species as would be provided by a Habitat Conservation Plan. Therefore, the modified project would have ***no impact*** with respect to conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Special-Status Species

One special-status plant, Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), was determined to have a moderate potential to occur in the modified project site. No special-status plants were observed during field surveys performed for the modified project on May 12, 2022, and August 25, 2022. A close relative of the Congdon's tarplant, the non-special-status Fitch's tarplant, was observed at the Sunol Valley Water Treatment Plant during the August 25, 2022, survey. Both species have a similar blooming period, which suggests that if the rare Congdon's tarplant was present at the modified project site, it likely would have been detected during the late-season survey effort. All other special-status plant species were determined to have low or no potential to occur in the modified project site.[23] Therefore, the modified project would have no impact on special-status plants.

Based on records from the California Natural Diversity Database and habitat types present in the modified project site, the following species have a moderate or greater potential to occur in the biological study area for the modified project, and are discussed further below:[24]

Reptiles and Amphibians

- Alameda whipsnake: Federally Threatened, State Threatened
- Western pond turtle: California Department of Fish and Wildlife Species of Special Concern
- California tiger salamander – central California distinct population segment (pop. 1): Federally Threatened, State Threatened
- California red-legged frog: Federally Threatened, California Department of Fish and Wildlife Species of Special Concern

[23] AECOM, Biological Resources Assessment, Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, March 2023.
[24] Ibid.

Birds

- White-tailed kite (*Elanus leucurus*): California Department of Fish and Wildlife Fully Protected (nesting and foraging)
- Golden eagle (*Aquila chrysaetos*): California Department of Fish and Wildlife Fully Protected (foraging only)
- American peregrine falcon (*Falco peregrinus anatum*): California Department of Fish and Wildlife Fully Protected (foraging only)
- Tri-colored blackbird (*Agelaius tricolor*): State Threatened

Bats and Other Mammals

- Pallid bat (*Antrozous pallidus*): California Department of Fish and Wildlife Species of Special Concern
- Townsend's big-eared bat (*Corynorhinus townsendii*): California Department of Fish and Wildlife Species of Special Concern
- San Francisco dusky-footed woodrat: California Department of Fish and Wildlife Species of Special Concern

No federally or state-listed species were observed during reconnaissance-level wildlife surveys conducted on May 12, 2022, and March 31, 2023. A golden eagle was observed flying over the modified project study area during the May 12, 2022, survey.[25] An active golden eagle nest has been observed approximately 0.17 mile east of the former tree nursey site since 2021.[26]

The study area for the approved project was larger than that for the modified project and included additional staging and work areas near the intersection of Calaveras Road and I-680—as well as work in Alameda Creek—which are not proposed for the modified project. Therefore, some of the special-status species evaluated in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR, including fish, foothill yellow-legged frog, and western burrowing owl, were determined to have no or low potential to occur in the study area for the modified project due to the absence of suitable habitat, and are not further evaluated.

Similar to the approved project, construction activities for the modified project could cause loss of habitat for special-status species as well as direct mortality to individuals, as further described below. Following the construction of proposed facilities, operations and maintenance activities associated with the modified project would remain substantially similar to current activities in terms of scale and intensity. The proposed new facilities would be adjacent to existing facilities in the plant site, and their operation would therefore not adversely affect special-status species more than the current

[25] Ibid.

[26] AECOM, Addendum to Biological Resources Assessment for the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, April 21, 2023.

facilities under existing conditions, because the low-quality habitat in the developed areas of the plant may be used for disperal and limited foraging, but not for nesting and breeding.[27, 28]

Special-Status Reptiles and Amphibians

Construction would occur in areas that potentially serve as upland and dispersal habitat for California tiger salamander; the modified project site does not contain suitable breeding habitat for California tiger salamander, but it does contain suitable upland habitat consisting of California grassland with mammal burrows. Although habitat in the modified project site is of low quality for California red-legged frog, western pond turtle, and Alameda whipsnake, these species may disperse through the modified project site to reach higher quality habitat in adjacent areas. A portion of the modified project site proposed for construction of the polymer feed facility is mapped as critical habitat for Alameda whipsnake and California red-legged frog; however, this area is low-quality California annual grassland habitat and does not contain primary constituent elements of critical habitat for either species. SFPUC informally consulted with USFWS, which concurred with the determination of no effect to this critical habitat in the project area.[29] California annual grassland in the modified project site is regularly mowed, and is adjacent to existing water treatment facilities in operation. Although the habitat is low quality, California tiger salamander, California red-legged frog, western pond turtle, and Alameda whipsnake could still occur in the modified project site. Use of construction equipment could potentially injure or kill individuals of these species. In addition, noise and vibration, presence of human activity, and lighting during nighttime construction could disturb or disorient individuals, impeding dispersal movement. Trenches and excavations, if left open during the night, could trap and injure California tiger salamander, California red-legged frog, western pond turtle, and Alameda whipsnake that are moving through the construction areas. Accidental discharge of hazardous materials used during construction could also degrade habitat for these four species. Although not in the modified project site, discharge of sediment carried by stormwater to the adjacent Alameda Creek during construction could degrade aquatic habitat for California red-legged frog and western pond turtle.

The SFPUC would implement its Standard Construction Measure #6 (Hazardous Materials) to minimize the potential for a release of hazardous materials used during construction, and to provide prompt response to any inadvertent spills. This includes storing hazardous materials pursuant to manufacturer recommendation, maintaining spill kits on site, and containing and cleaning up any spills in accordance with applicable laws. In addition, the SFPUC would implement its Standard Construction Measure #3 (Water Quality), which requires that erosion and sedimentation controls be tailored to the modified project site (such as fiber rolls and/or gravel bags around storm drain 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), and it requires preparation of a Stormwater Pollution Prevention Plan. Although implementation of Standard Construction Measures #3 and #6 would maintain potential effects on special-status reptiles and amphibians from sedimentation and accidental pollutant discharge at less-than-significant levels, the potential for

[27] Ibid.
[28] AECOM, Biological Resources Assessment, Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, March 2023.
[29] Email communication from Ryan Olah, USFWS, to JT Mates-Muchin, SFPUC, on March 29. 2021.

direct mortality or entrapment resulting from construction of the modified project would be a potentially significant impact on California tiger salamander, California red-legged frog, western pond turtle, and Alameda whipsnake. In addition, although the temporary and permanent loss of disturbed California annual grassland would not be considered a significant loss of habitat for these species because of its low quality and marginal suitability, establishment of invasive weeds in temporarily disturbed construction areas could subsequently spread to adjacent areas and degrade higher quality habitat for these species, which would be a potentially significant impact. However, implementation of Mitigation Measures BIO-1a (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel), BIO-1b (Install Wildlife Exclusion Fencing along the Perimeter of the Construction Work Area and Implement General Measures to Avoid Impacts to Special-Status Species and Sensitive Natural Communities), BIO-1c (Conduct Pre-Construction Surveys and Monitor Construction Activities for California Tiger Salamander, California Red-Legged Frog, Western Pond Turtle, and Alameda Whipsnake), BIO-1d (Prepare and Implement a Vegetation Restoration and Compensation Plan), would reduce potential impacts to California tiger salamander, California red-legged frog, western pond turtle, and Alameda whipsnake to a less-than-significant level by requiring worker awareness training to educate workers on special-status species potentially occurring in the modified project area and required protection measures; preconstruction surveys, installation of exclusion fencing, and construction monitoring to reduce potential for special-status species to be present in active construction areas where they could be injured or killed; invasive weed control measures to reduce degradation of habitat from establishment and spread of invasive species; and revegetation of disturbed areas and monitoring of restored areas to replace disturbed habitat in accordance with outlined performance standards. These mitigation measures have been modified as appropriate to reflect the proposed components and work area conditions of the modified project (e.g., no work in Alameda Creek); deletions are shown in strikethrough and additions in double underline.

It should be noted that Mitigation Measure BIO-1d as presented in Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR requires the preparation of a revegetation plan and compensatory mitigation for other types of habitats (wetlands, oak woodlands, riparian) impacted by the approved project. Because the modified project would not result in loss of wetlands, oak woodlands, and riparian habitat, revegetation and compensatory mitigation for the loss of these habitat types would not be required for the modified project. Therefore, Mitigation Measure BIO-1d as written for the approved project was revised for the modified project to remove these requirements. In addition, the approved project required implementation of Mitigation Measure BIO-1e (Compensate for Permanent Loss of Upland Habitat for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake) to mitigate potentially significant impacts to California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake habitat. However, as described above, the modified project would not result in a significant impact related to permanent loss of habitat for these species; therefore, Mitigation Measure BIO-1e is not required for the modified project.

Special Status Birds and Bats

White-tailed kite has the potential to both forage and nest in the modified project area, whereas golden eagle, American peregrine falcon, and tricolored blackbird may forage in this area. Common nesting birds that are protected by the Migratory Bird Treaty Act also have the potential to forage and

nest in the modified project area. In addition, pallid bat and Townsend's big-eared bat both have the potential to forage and roost (in trees) in the project area for the modified project. Construction activities proposed under the modified project would not have a significant impact on special-status bird and bat foraging due the wide availability of comparable foraging habitat in the surrounding areas. However, construction of the modified project could impact the nesting or roosting activities of these species, potentially resulting in mortalities, which would be a significant impact. Implementation of Mitigation Measures BIO-1a (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel), BIO-6 (Remove Trees and Shrubs during the Non-breeding Season [August 16–February 14] for Birds or Conduct Nesting Bird Surveys, and Establish No-Disturbance Buffers, as Appropriate), and BIO-7 (Conduct Preconstruction Surveys for Sensitive Bats and Implement Avoidance and Minimization Measures if Found) would reduce potential impacts to special-status bird and bat species to a less-than-significant level by requiring worker awareness training, preconstruction surveys, and protection of the nesting and roosting activities of these species during construction.

As stated above, the study area for the approved project was larger than that for the modified project, and some of the special-status species evaluated in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR were determined to have no or low potential to occur in the study area for the modified project due to the absence of suitable habitat, and are not further evaluated. Due to the disturbed nature of the modified project site, it is unlikely to support borrowing owl nesting overwintering, and the potential for the species to occur in the modified project site is low.[30] Therefore, impacts to western burrowing owl are not expected to result from implementation of the modified project, and EIR Mitigation Measure BIO-5 (Conduct Preconstruction Surveys for Active Burrowing Owl Burrows and Implement CDFG Guidelines for Burrowing Owl Mitigation, if Necessary) applicable to the approved project to mitigate impacts on western burrowing owl would not be needed for the modified project.

San Francisco Dusky-Footed Woodrat

Suitable habitat for San Francisco dusky-footed woodrat is present in the oak woodland habitats at the margins of the modified project site. Construction could disturb or destroy San Francisco dusky-footed woodrat dens (middens made of piled sticks) and harm individuals of this species, which have a moderate potential to occur in the area proposed for the modified project.[31] Injury or mortality of San Francisco dusky-footed woodrat would be a potentially significant impact. Implementation of Mitigation Measures BIO-1a (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel) and BIO-10 (Conduct Pre-Construction Surveys for Dusky-footed Woodrat and Implement Avoidance and Minimization Measures if Found) would reduce impacts to this species to a less-than-significant level by requiring worker awareness training, preconstruction surveys, and fencing and avoidance of woodrat nests.

[30] AECOM, Biological Resources Assessment, Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, March 2023.
[31] Ibid.

Mitigation Measure BIO-1a: Conduct Mandatory Biological Resources Awareness Training for All Project Personnel

The SFPUC shall ensure that mandatory biological resources awareness training is provided to all construction personnel as follows:

- The training shall be developed and provided by a ~~USFWS [United States Fish and Wildlife Service] approved~~ qualified biologist familiar with the special-status species that may occur in the project area. The training program shall be approved by an SFPUC staff biologist prior to implementation if prepared by a consulting biologist.
- The training shall be provided before any work occurs in the project area, including equipment mobilization, vegetation clearing or site grading.
- The training shall provide educational information on the natural history of the special-status species potentially occurring in the project area, a discussion of required mitigation measures to avoid impacts on the special-status species, and discuss penalties for not complying with biological mitigation requirements.
- The training shall also include education regarding the importance of preventing the spread of invasive non-native species.
- If new construction personnel are added to the project, the contractor shall ensure that new personnel receive training before they start working. The subsequent training of personnel can include a videotape of the initial training and/or the use of written materials rather than in-person training by a biologist.

Mitigation Measure BIO-1b: Install Wildlife Exclusion Fencing along the Perimeter of the Construction Work Area and Implement General Measures to Avoid Impacts to Special-Status Species and Sensitive Natural Communities

To prevent special-status species from moving through the project area, the SFPUC or its contractors shall install temporary exclusion fencing around the project boundaries (including access roads, staging areas, etc.) within one week prior to the start of construction activities. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed and that construction equipment is confined to the designated work areas, including any off-site mitigation areas and access thereto. The fence shall be made of suitable material that does not allow any of the animals listed above to pass through or over, and the bottom shall be buried to a depth of at least 6 inches such that these species cannot crawl under the fence. In addition, the fence shall include one-way funnels to allow special-status wildlife species to escape if they become trapped within the site. The exclusion fencing shall not cross Alameda Creek, but shall be installed around the perimeter of the construction work areas on ~~both sides~~ the west side of Alameda Creek to confine California red-legged frogs to the creek channel and discourage them from moving into the work area from the creek.

A ~~USFWS-approved~~ qualified biological monitor shall be on-site during installation of the fencing to survey for and relocate any animals to the outside the work area boundaries. Federally listed species shall only be relocated if authorized by the USFWS. State-listed species shall only be relocated if authorized by CDFG [California Department of Fish and Game/Wildlife]. The exclusion fencing shall be removed only after construction of the project is entirely completed.

Exclusionary construction fencing and explanatory signage shall be placed around the perimeter of sensitive vegetation communities that could be impacted by construction activities throughout the period during which such impacts could occur. Signage shall explain the nature of the sensitive resource and that no impact to the community is allowed. The fencing shall include a buffer zone of at least 20 feet between the resource and construction activities. All exclusionary fencing shall be maintained in good condition throughout the construction period.

The SFPUC shall avoid and minimize impacts on native mature trees (defined as trees that are 6 inches diameter at breast height [dbh], or 10 inches dbh aggregate for multi-trunk trees) by implementing the following measures:

- A qualified arborist (defined as an International Society of Arboriculture [ISA] certified arborist or a consulting arborist who is a member of the American Society of Consulting Arborists [ASCA]) or a qualified biologist shall identify the location of fencing to be installed around trees to be retained.

- Prior to the start of construction, the SFPUC or its contractors shall install a 4-foot-tall fence at the limits of construction, outside the dripline of all trees that are to be retained that are within 50 feet of any grading, road improvements, underground utilities, or other development activity (identified in the field via flagging by the qualified arborist or biologist). Also prior to construction, the SFPUC shall verify that the temporary construction fencing is installed and approved by a qualified arborist or biologist. Any encroachment within these areas must first be approved by a qualified arborist or biologist and the SFPUC.

- For native trees on slopes, a silt fence shall be installed at the upslope base of the protective fencing to prevent soil from drifting down over the root zone (defined as the extent of the tree dripline) if work shall be performed upslope of any such trees.

- The contractor shall be required to perform any necessary pruning using the “Pruning Guidelines” adopted by the California Department of Forestry and Fire Protection and consistent with the Alameda County Tree Ordinance.

In addition, the SFPUC shall ensure that the following general measures are implemented by the contractor to prevent and minimize impacts to special-status species and sensitive natural communities:

- No pets shall be allowed in the project area.
- No firearms shall be allowed in the project area.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas.
- All workers and construction activities shall occur away from sensitive natural communities.
- If trenches greater than 2 feet are left open overnight, the trench shall either be covered at the end of the work day (e.g., with plywood or other hard material) or one or more escape ramps (constructed of earth fill or wooden planks) shall be provided. Before such holes are filled, they shall be thoroughly inspected for trapped animals.
- Project personnel shall be required to immediately report any harm, injury, or mortality of a special-status species during construction, including entrapment, to the construction foreman or biological monitor. The construction foreman or monitor shall immediately notify the SFPUC. The SFPUC shall provide verbal notification to the USFWS, Endangered Species Office in Sacramento, California, and/or to the local CDFG warden or biologist (as applicable) within one working day of the incident. The SFPUC shall follow up with written notification to USFWS and/or CDFG (as applicable) within five working days of the incident. All observations of special-status species shall be recorded on CNDDB [California Natural Diversity Database] field sheets and sent to CDFG by the SFPUC or representative biological monitor.
- The spread of invasive non-native plant species and plant pathogens shall be avoided or minimized by implementing the following measures:
  - Construction equipment shall arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species.
  - Any imported fill material, soil amendments, gravel etc., required for construction and/or restoration activities that would be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material.
  - Certified, weed-free, imported erosion-control materials (or rice straw in upland areas) shall be used exclusively, if possible.
  - To reduce the movement of invasive weeds into uninfested areas, the contractor shall stockpile topsoil removed during excavation of trenches or test pits, which shall be subsequently replaced during re-establishment of disturbed project areas.
  - Trees within the project site areas shall be assessed for symptoms of sudden oak death and the potential presence of *Phytophthora ramorum*. If diseased trees are identified within the work area, site controls shall be utilized to minimize the spread of

infected plant and soil material to other project locations by segregating any removal material from other plant and soil material and by providing for vehicle/equipment wash down before moving equipment to other work locations. The Alameda County registered professional forester shall be consulted prior to disposal of any diseased trees. Soil removed from the immediate vicinity of an infected tree shall not be used for site restoration and may require disposal at a landfill.

- Implementation of these measures during construction and site restoration shall be verified by a biological or environmental monitor.

Mitigation Measure BIO-1c: Conduct Pre-Construction Surveys and Monitor Construction Activities for California Tiger Salamander, California Red-Legged Frog, Western Pond Turtle, and Alameda Whipsnake

Preconstruction Surveys

Prior to initial ground-disturbing activities in the project area, a qualified biologist shall survey the construction areas as well as undeveloped areas in the immediate vicinity for the presence of California tiger salamander~~s~~, California red-legged frog~~s~~, and Alameda whipsnake~~s~~, as follows:

- *California tiger salamander.* Not more than two weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, the ~~USFWS [United States Fish and Wildlife Service]-approved~~ qualified biologist shall survey upland habitat in the project area suitable for California tiger salamanders and suitable refuge/burrow sites. As feasible, refuge/burrow areas identified within the project boundary shall be temporarily fenced and avoided. If relocation of individuals is required, SFPUC shall consult with USFWS and California Department of Fish and Wildlife. ~~At locations where potential refuge/burrows are identified and cannot be avoided, the burrows shall be excavated by hand prior to construction. If a burrow is occupied, the individual animal shall be moved to a natural burrow or artificial burrow constructed of PVC pipe within 0.25 mile of the project area. Excavation and relocation shall only be conducted by USFWS-approved biologists and only in accordance with authorization by USFWS in a biological opinion. Preconstruction surveys shall also be conducted prior to the placement of and spoils in the North or South Quarry Pits, and any individuals found shall be relocated to suitable adjacent aquatic habitat.~~

- *California red-legged frog.* Not more than two weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work the ~~USFWS-approved~~ qualified biologist shall survey suitable ~~aquatic habitat (Alameda Creek) and~~ upland habitat in the project area for California red-legged frog. ~~Surveys of Alameda Creek shall include the creek channel and associated riparian habitat within the project area and 1000 feet downstream of the project area.~~ The biologist shall survey upland habitat for potential burrows/aestivation sites. The same methodology for the preconstruction surveys of upland habitat for burrows~~,~~ and fencing burrows~~, and for~~

~~excavating and relocating individual animals, if found,~~ shall be implemented as described above for California tiger salamander. If relocation of individuals is required, SFPUC shall consult with USFWS. ~~Preconstruction surveys shall also be conducted prior to the placement of and spoils in the North or South Quarry Pits, and any individuals found shall be relocated to suitable adjacent aquatic habitat.~~

- *Western Pond Turtle.* Not more than two weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, a qualified biologist shall survey suitable ~~aquatic habitat (Alameda Creek) and~~ upland habitat in the project area for western pond turtle. ~~Surveys of Alameda Creek shall include the creek channel and associated riparian habitat within the project area and 1000 feet downstream of the project area. If any pond turtles are found within the creek, they shall be moved 0.25 mile downstream on the project area in Alameda Creek, as authorized by CDFG in a Memorandum of Understanding.~~ The biologist shall survey upland habitat for the presence of nests containing pond turtle hatchlings and eggs. All nests containing hatchlings or eggs identified within the project boundary shall be temporarily fenced and avoided.

- *Alameda whipsnake.* Not more than two weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, a ~~USFWS-approved~~ qualified biologist shall conduct a reconnaissance survey of upland habitat in the project area suitable for Alameda whipsnake. ~~If an Alameda whipsnake is found, the approved biologist shall relocate the species to out of the construction area.~~ If relocation of individuals is required, SFPUC shall consult with USFWS and California Department of Fish and Wildlife.

~~Excavation, r~~ Relocation~~, or collapse of burrows~~ of federally listed species shall only be conducted as authorized by the USFWS, for state-listed species as authorized by CDFG [California Department of Fish and Game/Wildlife], or by both agencies for species that are protected at both the federal and state level.

Construction Monitoring

At the beginning of each workday during initial ground disturbance (including grading, excavation, and vegetation-removal activities) and during the rainy season, a ~~USFWS-approved~~ qualified biologist shall conduct onsite monitoring for the presence of California tiger salamanders, California red-legged frogs, and Alameda whipsnakes in the area where ground disturbance would occur, as follows:

- ~~Survey Alameda Creek and the quarry-pit ponds prior to any ground disturbing or vegetation-removal activities at or near these areas.~~

- Inspect the wildlife exclusion fence to ensure that it does not have any tears or holes, that the base of the fence is still buried, and that no individuals have been trapped on or outside of the fence.

- Closely monitor any California tiger salamanders, California red-legged frogs, and Alameda whipsnakes if found along, on, or outside the fence until they move away from the construction area. ~~If they do not move out of the construction area, a USFWS-approved biologist shall move them as specified below.~~

- Check all open trenches or holes and under parked vehicles for the presence of California tiger salamanders, California red-legged frogs, and Alameda whipsnakes.

If any of these species is found by the biological monitor or construction personnel within the work area, construction activities shall cease in the immediate vicinity of the individual until the USFWS and/or CDFG is contacted and the animal has been removed, ~~as allowed by the USFWS's Biological Opinion for the project,~~ from the construction area by a ~~USFWS-approved~~ qualified biologist and is released near a suitable burrow or other suitable habitat ~~at least 1,000 feet away~~ no more than 300 feet[32] from the construction area, or until the animal moves on its own away from the construction area.

The biological monitor shall not stay onsite for the entire day but shall remain on-call in case any of these animals are discovered and need to be moved. The SFPUC shall designate the SFPUC Resident Engineer as the point of contact in the event that a California tiger salamander, California red-legged frogs, or Alameda whipsnakes is discovered onsite when the biological monitor is not present.

The rainy season shall be determined by rainfall each year. Rainy season monitoring shall begin immediately after the first rainfall in the fall and continue until three weeks after the last rain in the spring. If it rains again after this time, then daily monitoring shall recommence until three weeks past these rains.

During the non-rainy season, and once all initial ground-disturbing activities are completed, the biological monitor shall perform spot checks of the project area at least once a week for the duration of construction to ensure that the perimeter fence is in good order, trenches are being covered if left open overnight (or escape ramps are being provided), project personnel are conducting checks beneath parked vehicles prior to their movement, that no individual animals are located outside or inside the construction fencing, and that all other required biological protection measures are being complied with.

Mitigation Measure BIO-1d: ~~Prepare and Implement a~~ Invasive Weed Control and Vegetation Restoration ~~and Compensation Plan~~

~~The SFPUC shall prepare a Vegetation Restoration and Compensation Plan (Plan) and shall ensure that the Plan is successfully implemented by the contractor. The Plan shall include, at a minimum, detailed specifications for invasive weed control, restoring all temporarily disturbed areas, compensating for the temporal impacts of temporary disturbance to water~~

[32] Distance revised consistent with current regulatory guidance for relocation of California tiger salamander and California red-legged frog as indicated in the California Department of Fish and Wildlife Incidental Take Permit and United States Fish and Wildlife Service Biological Opinion for the SFPUC Alameda Creek Diversion Dam Project.

~~and wetlands, and compensating for the loss of all permanently disturbed areas in the project area. The plan shall also indicate the best time of year for seeding to occur. Plantings undertaken between April 15 and October 15 shall include regular watering to ensure adequate growth.~~

~~To facilitate preparation of the Plan, prior to construction, the SFPUC shall ensure that additional pre-construction surveys of the areas are conducted by a qualified botanist (i.e., a botanist with experience in identifying plant species, plant communities, and wetlands in this area) to collect detailed baseline vegetation composition data including species occurrence, vegetation characterization (tree diameter size, etc.), and percent cover.~~

~~The Plan shall be included in the SFPUC's permit-application packages submitted to the USACE, RWQCB, CDFG, and USFWS. The SFPUC shall ensure that a USFWS- and CDFG-approved biologist reviews restoration efforts in grassland areas and oversees restoration efforts in all of the other vegetation communities. Described below are the minimum restoration and compensation measures that shall be included in the Plan.~~

Invasive Weed Control Measures

Invasive weeds such as yellow star-thistle, purple star-thistle, Italian thistle, bull thistle, barb goat grass, and medusa head grass readily colonize soils that have been disturbed by grading or other mechanical disturbance. To avoid or minimize the introduction or spread of invasive weeds into uninfested areas, the SFPUC shall incorporate the following measures into the construction plans and specifications for work:

- Construction equipment shall arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species.
- Any imported fill material, soil amendments, gravel etc., required for construction and/or restoration activities that would be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material.
- Certified, weed-free, imported erosion-control materials (or rice straw in upland areas) shall be used exclusively.
- The environmental awareness training program for construction personnel shall include an orientation regarding the importance of preventing the spread of invasive weeds.
- To reduce the movement of invasive weeds into uninfested areas, the contractor shall stockpile topsoil removed during excavation of trenches or test pits, which shall be subsequently replaced during re-establishment of disturbed project areas.
- Implementation of these measures during construction and site restoration shall be verified by a biological or environmental monitor.

Minimum Restoration Measures

Restoration areas are those areas that are disturbed on-site but would be restored to their baseline conditions as defined by the success criteria described below. In order to restore these areas, the SFPUC shall implement the following:

- Stockpile the topsoil separately from subsoil, replace soil layers in the same order they were removed, and restore the natural grade and contours of the area.
- For grassland vegetation areas, reseed the affected areas with a noninvasive native grass and forb seed mix.
- ~~For the perennial wetland removed during construction, replant the affected area with plants of similar size and in similar density as were removed.~~
- For native trees (defined as trees that are 6 inches diameter at breast height or 10 inches for multi-tree trunks), replant affected areas with the same species with either three replacement trees of 15-gallon size for any native mature tree within the County right-of-way of Calaveras Road; or on an inch-by-inch basis for any native mature tree outside the County right-of-way or as otherwise agreed to with the USFWS and CDFG.

~~*Minimum Compensation Measures*~~

~~Compensation areas are those areas where vegetation plantings shall occur in off-site areas not disturbed by project construction to compensate for temporal and permanent vegetation losses on-site. In order to compensate for any such temporal and permanently disturbed areas, the SFPUC shall implement the following:~~

- ~~For all habitat types, replant other nearby existing disturbed areas on SFPUC property with similar species from locally collected propagules and implement legal instruments (such as conservation easements or similar development constraint and habitat management funding guarantees) to manage the areas for habitat resources in perpetuity (i.e., not to be used for other development projects) at a minimum ratio of 1 acre (or portion) restored to 1 acre (or portion) lost or greater acreage basis (as determined in consultation with applicable permitting agencies).~~
- ~~For grasslands, seed the compensation area with a noninvasive native grass and forb seed mix.~~
- ~~For the perennial wetland along the access road, reestablish a perennial wetland or replant riparian vegetation along Alameda Creek either in or near the project area on a minimum 1:1 or greater acreage basis (as determined in consultation with applicable permitting agencies) and implement legal instruments (such as conservation easements or similar development constraint and habitat management funding guarantees) to manage the areas for habitat resources in perpetuity (i.e., not to be used for other development projects).~~

- ~~As an alternative to the above compensation methods, or in combination with, the SFPUC may also contribute to a mitigation bank approved by the USFWS and/or CDFG for the affected vegetation types.~~

Minimum Success Criteria

The success criteria for restoring temporarily disturbed areas shall be as follows:

- All areas of grassland~~, woodland, riparian, or wetlands~~ not permanently disturbed shall be restored to their baseline condition. Percent cover and vegetation composition (other than non-native annual grassland) shall meet or exceed baseline cover and composition condition.

- Temporarily impacted and restored grassland ~~upland~~ areas shall be monitored at least once a year for at least three years or greater, as determined in consultation with applicable permitting agencies and/or as needed to verify whether the vegetation is fully established and self-sustaining. ~~Monitoring of herbaceous and shrub species in wetlands shall be for at least 5 years or greater. Monitoring of riparian trees shall be for at least 10 years or greater.~~

- If full maturity of slow-growing vegetation will take longer than three years (for grassland ~~upland~~ vegetation), ~~5 years (wetland shrubs/herbaceous plants), or 10 years (riparian trees),~~ such species shall be fully established and self-sustaining in order to meet the criteria and the monitoring period shall be extended accordingly to verify whether the vegetation is fully established and self-sustaining.

- ~~Upland~~ Grassland restoration areas shall be monitored for invasive plants annually in the first three years following replanting. If invasive plants are found during the three-year monitoring period, they shall be removed as necessary to support meeting the cover and vegetation composition success criteria. ~~Wetland areas and riparian trees shall be monitored for the first 5 and 10 years, respectively, for invasive species.~~ The relative cover of invasive plant species shall not exceed 5 percent in any year. Invasive plant species shall be defined as any highly invasive non-native species (Tier 1), or moderately invasive non-native species (Tier 2) listed in the Water Board's Fact Sheet for Wetland Projects.

- The earliest success criteria can first be met for grassland ~~upland~~ vegetation is three years after restoration~~, for wetland vegetation is 5 years, and for riparian trees is 10 years~~. Maintenance and monitoring shall continue until the success criteria are met.

- Alternatively, if success criteria cannot be met within three years for grassland ~~upland~~ vegetation ~~(or 5 or 10 years for wetlands and riparian trees)~~, the SFPUC may explore alternative mitigation options, such as off-site compensation or mitigation credits, with the applicable resource agencies.

~~The success criteria for compensation planting for permanently disturbed areas shall be as follows:~~

- ~~All plantings shall replace permanent losses on at least a 1:1 basis on an acreage basis (or greater ratio as determined in consultation with applicable permitting agencies). Percent cover and vegetation composition for permanent new plantings shall be similar to a nearby reference site condition defined as a variation of no more than 30 percent from the reference site cover and composition condition. For wetland compensation areas, evidence of planned hydro-period (e.g., inundation duration) and positive field indicators of wetland hydrology (such as wetland vegetation, wetland soils and/or observed inundation) shall be established.~~

- ~~Compensation planting areas shall be monitored at least once a year for at least 5 years except that oak woodland compensation planting areas shall be monitored for at least 7 years.~~

- ~~If full maturity of slow-growing vegetation will take longer than 5 years (or oak trees will take longer than 7 years), such species shall be fully established and self-sustaining in order to meet the success criteria.~~

- ~~Compensation planting areas shall be monitored for invasive plants annually in the first 5 years following replanting (or 7 years for areas of oak woodland). If invasive plants are found during the 5-year monitoring period (or 7-year period), they shall be removed as necessary to support meeting the cover and vegetation composition success criteria.~~

- ~~Success criteria shall be assessed within 5 years after restoration (or 7 years for oak woodland). Maintenance and monitoring shall continue until the success criteria are met.~~

- ~~Alternatively, if success criteria cannot be met within 5 years (or 7 years for oak woodland), the SFPUC may explore alternative mitigation options, such as off-site compensation or mitigation credits, with the applicable resource agencies.~~

Mitigation Measure BIO-6: Remove Trees and Shrubs during the Non-breeding Season (August 16–February 14) for Birds or Conduct Nesting Bird Surveys, and Establish No-Disturbance Buffers, as Appropriate

The SFPUC shall conduct construction and tree and shrub removal during the non-breeding season (generally August 16 through February 14) where feasible to avoid impacts to migratory birds including raptors. If construction activities must occur during the breeding season (February 15–August 15), the SFPUC shall:

- Retain a qualified wildlife biologist who is experienced in identifying bird nests and breeding behaviors to conduct nesting-bird surveys in and within 500 feet of the project site. These surveys shall be conducted within one week prior to initiation of construction activities (including preconstruction activities such as fence installation) at any time between February 15 and August 15. If no active nests or roosts are detected during surveys, then no additional mitigation is required.

- If migratory bird or raptor nests are found in the construction area or in the adjacent surveyed area or are known to occur within an applicable regulatory buffer from the construction area (such as the golden eagle nest that has been documented approximately 0.17 mile east of the former tree nursey site), a no-disturbance buffer shall be established around the nesting location to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late-June through mid-July). The extent of these buffers shall be determined by a wildlife biologist in consultation with the applicable resource agencies (i.e., USFWS [United States Fish and Wildlife Service] and/or CDFG [California Department of Fish and Game/Wildlife]) and shall depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance activity, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors shall be analyzed and used by a qualified wildlife biologist to assist the USFWS and/or CDFG in making an appropriate decision on buffer distances. Trees and shrubs that contain nests may be removed after a qualified wildlife biologist determines that the young have fledged.

Mitigation Measure BIO-7: Conduct Preconstruction Surveys for Sensitive Bats and Implement Avoidance and Minimization Measures if Found

- Within one week prior to tree removal, a qualified biologist shall survey any trees that shall be removed during project construction for roosting bats. Bats may be present any time of the year. The biologist shall thoroughly search trees that provide appropriate roosting habitat for bats (trees with foliage, cavities, or that are hollow) for bats or evidence of bats. If no roosting bats or evidence of bats are found, removal of trees may proceed. If bats are found or evidence of use by bats is present, trees shall be mapped and marked with flagging. The SFPUC shall ensure that the trees are not removed until CDFG [California Department of Fish and Game/Wildlife] has been consulted for guidance on measures to avoid and minimize disturbance of the bats. Measures may include deferring tree removal, monitoring trees and excluding bats from a tree until it is removed, and implementation of a temporary construction buffer to avoid disturbance of young before they are able to fly (for pallid bats, this period is between April and August).

Mitigation Measure BIO-10: Conduct Pre-Construction Surveys for Dusky-footed Woodrat and Implement Avoidance and Minimization Measures if Found

- Not more than two weeks prior to disturbance or vegetation removal in suitable habitat for dusky-footed woodrat (riparian willow forest/scrub) a qualified biologist shall conduct a preconstruction survey for stick nests of woodrats. The survey shall be conducted in the riparian willow forest/scrub habitat along Alameda Creek. Locations of nests within the survey area shall be flagged and mapped. Woodrat nests within the construction areas shall be fenced and avoided. If it is determined that avoidance is not possible, the SFPUC shall consult with CDFG [California Department of Fish and Game/Wildlife] to determine if trapping woodrats (using live traps) and disassembling nests is warranted.

As with the approved project, implementation of these measures (as also required for the modified project) would reduce harm to individuals of special-status species through avoidance of conflicts with construction activities and restoration of temporarily impacted habitats. Therefore, this impact would be ***less than significant with mitigation***.

Two of the mitigation measures identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR for the approved project were determined to be not required for the modified project because they would not be necessary to reduce the modified project's impact on special-status species to a less-than-significant level, as described below.

The EIR's biological resources analysis presumed implementation of Mitigation Measure HYD-1a (Construction Water Quality Best Management Practices) in making less-than-significant-with-mitigation impact determinations for the approved project. As described above, during construction, the SFPUC would implement its Standard Construction Measure #6 (Hazardous Materials) to minimize the potential for release of hazardous materials used during construction, and would implement its Standard Construction Measure #3 (Water Quality), which requires preparation of a Stormwater Pollution Prevention Plan and other measures equivalent to those in Mitigation Measure HYD-1a to prevent discharges of sediment and pollutants to storm drains and all surface waterways. Therefore, Mitigation Measure HYD-1a would not be necessary to reduce impacts of the modified project.

In addition, the EIR included Mitigation Measure HYD-1b (Management of Dewatering Effluent Discharge) to prevent water quality impacts from dewatering effluent discharges during construction. Because the modified project would not require dewatering during construction, this measure would not be needed for the modified project.

Sensitive Habitats

No sensitive natural communities are present in the modified project site. Some western (California) sycamore trees are present in the modified project construction footprint; however, they compose a small component of an upland coast live oak woodland. They do not constitute enough dominance in the canopy layer to meet the sensitive natural community alliance definition for California Sycamore Woodland in the Manual of California Vegetation, which requires at least 30 percent relative cover, or greater than 5 percent absolute cover of western sycamore in the tree canopy, and therefore the western sycamores present in the modified project site do meet the criteria to be deemed a sensitive natural community.[33] Because no sensitive natural communities are present in the modified project site, the modified project would have ***no impact*** on sensitive natural communities, and the EIR's mitigation measures applicable to the approved project to mitigate impacts on sensitive natural communities would not be needed for the modified project.

Wetlands and Aquatic Resources

No wetlands or perennial, intermittent, or ephemeral streams are present in the modified project site.[34] Because no wetlands or other aquatic resources are present in the modified project site, the modified project site would have ***no impact*** on such resources, and the EIR's mitigation measures

[33] AECOM, Biological Resources Assessment, Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, March 2023.
[34] Ibid.

applicable to the approved project to mitigate impacts on wetlands and aquatic resources would not be needed for the modified project.

Wildlife Movement and Migratory Corridors

There are no known established native wildlife nursery sites in the modified project area. Terrestrial wildlife could use the Sunol Valley as a migratory corridor. The construction area for the modified project would be fenced, and would exclude wildlife movement through the area during construction. However, there are extensive areas adjacent to the modified project site by which common wildlife would still be able to traverse Sunol Valley during the construction period, and any interference with movement or migration of common terrestrial wildlife species during constuction would be minimal. Following the construction of proposed facilities, operations and maintenance activities associated with the modified project would remain substantially similar to current activities in terms of scale and intensity. The proposed new facilities would be adjacent to existing facilities in the plant site, and would therefore not adversely affect the potential for wildlife movement through the Sunol Valley more than the current facilities under baseline conditions, given the low-quality habitat in the plant that may be used for wildlife movement and dispersal,[35, 36] and because much of the plant is surrounded by fencing, which already limits wildlife movement through the plant. Therefore, the modified project's impact on wildlife movement and migratory corridors would be ***less than significant***.

Local Policies or Ordinances Protecting Biological Resources

The relevant policies and ordinances protecting biological resources in the modified project area are the SFPUC Alameda Watershed Management Plan[37] and the Alameda County Tree Ordinance. The SFPUC is required to conduct facilities siting and construction activities in accordance with the policies of the Alameda Watershed Management Plan. Consistent with plan policies V15, W9, and W10, the SFPUC is required to conduct appropriate surveys and site-specific analyses to site facilities in a way that maintains landscape connectivity and minimizes fragmentation and degradation of wildlife habitat, and to carry out construction in ways that minimize impacts on biological resources. As described in the analyses above, construction of the modified project would occur in previously developed and disturbed grassland areas adjacent to other facilities. The modified project would not impact wetlands, aquatic features, or sensitive natural communities, and would not result in the fragmentation or degradation of valuable wildlife habitat. For these reasons, the modified project would be consistent with the policies of the Alameda Watershed Management Plan. Because the modified project would not include tree removal in a county right-of-way, the Alameda County tree ordinance would not be applicable. Therefore, the modified project would have ***no impact*** related to local plans and policies protecting biological resources.

Summary

In summary, with implementation of SFPUC Standard Construction Measures #3 and #6, and Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-6, BIO-7, and BIO-10; construction of the modified project would not result in significant impacts on biological resources greater than those

[35] Ibid.
[36] AECOM, Addendum to Biological Resources Assessment for the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project, April 21, 2023.
[37] SFPUC, Final Alameda Watershed Management Plan, April 2001.

identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR. Moreover, the modified project would not result in new significant impacts on biological resources that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe impacts than those identified; and would not require new mitigation measures.

CUMULATIVE IMPACTS

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR concluded that impacts on special-status species from habitat loss and direct mortality during construction and operation of the approved project, combined with similar impacts from other cumulative projects identified in the EIR, would be potentially significant. However, it concluded that, with implementation of mitigation measures, the approved project's contribution would be less than cumulatively considerable. Although the modified project would not have any adverse impacts on special-status species during operations, construction activities could result in potentially significant impacts on special-status wildlife from direct mortality and degradation of habitat; however, these impacts would be reduced to a less-than-significant level through the required implementation of SFPUC's Standard Construction Measures and required project mitigation measures (BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-6, BIO-7, and BIO-10). The planned Long Term Improvements Project at the plant could result in impacts similar to the modified project; however, because it would involve improvements to existing facilities in developed portions of the plant, impacts from construction of the Long Term Improvement are expected to be less than those of the modified project. Construction of the State Route 84 and SR-84/Interstate 680 Interchange Improvements project could result in impacts to habitats and special-status species similar to the modified project. The Initial Study with Mitigated Negative Declaration/Environmental Assessment for the State Route 84 and SR-84/ Interstate 680 Interchange Improvements Project determined that project construction would result in temporary and permanent loss habitats, and could result in injury or death to several of the same special-status species as the modified project; however, implementation of avoidance and minimization measures, restoration of temporary impact areas, and off-site compensation (if needed) for affected areas would reduce these impacts to less-than-significant levels.[38] Both projects would also comply with applicable state and federal regulations intended to minimize impacts to special-status species and their habitat. The combined impacts of the modified project and interchange project construction could result in a significant cumulative impact on biological resources because they both would involve construction in areas that provide habitat for western pond turtle, Alameda whipsnake, San Francisco dusky-footed woodrat, California tiger salamander, and California red-legged frog, and therefore could result in injury or direct mortality of these species. However, with the implementation of SFPUC's Standard Construction Measures and required project mitigation measures, and compliance with project-specific permit conditions, the modified project's residual contribution to cumulative impacts on special-status species would not be cumulatively considerable (***less than significant***).

[38] Caltrans, Interstate 680 Express Lanes from State Route 84 to Alcosta Boulevard Project Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact, October 2020.

As described above, the modified project would have no impact with respect to sensitive natural communities, wetlands and aquatic resources, and local policies or ordinances protecting biological resources, and therefore would not contribute to cumulative impacts related to these criteria (***no impact***).

In summary, the modified project would not result in new significant cumulative impacts on biological resources that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe impacts than those identified; and would not require new mitigation measures.

Other Environmental Topics with Less-Than-Significant Impacts

- **Land Use.** The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR concluded that construction of the approved project would have a less-than-significant impact on the existing land use character of the vicinity. As with the approved project, modified project construction activities would occur adjacent to existing water infrastructure and water treatment facility uses; therefore, this impact would remain less than significant. The EIR also concluded that operation of the approved project would have a less-than-significant impact on the existing land use character of the vicinity because the treated water reservoir, chlorine contact tank, and treatment plant expansion would be on previously disturbed land adjacent to the existing treatment plant, and would be compatible with the existing water treatment facilities. Similarly, the modified project would involve the addition of water treatment facilities and upgrades to existing treatment plant facilities, the operation of which would be compatible with the existing water treatment facilities. Therefore, operation of the modified project would not be incompatible with the existing land use character of the vicinity, and this impact would remain less than significant.

  As with the approved project, the modified project would not be sited near an established community, and this significance criteria is not applicable. Therefore, the modified project would not result in new significant land use impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe land use impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; and would not require new land use mitigation measures.

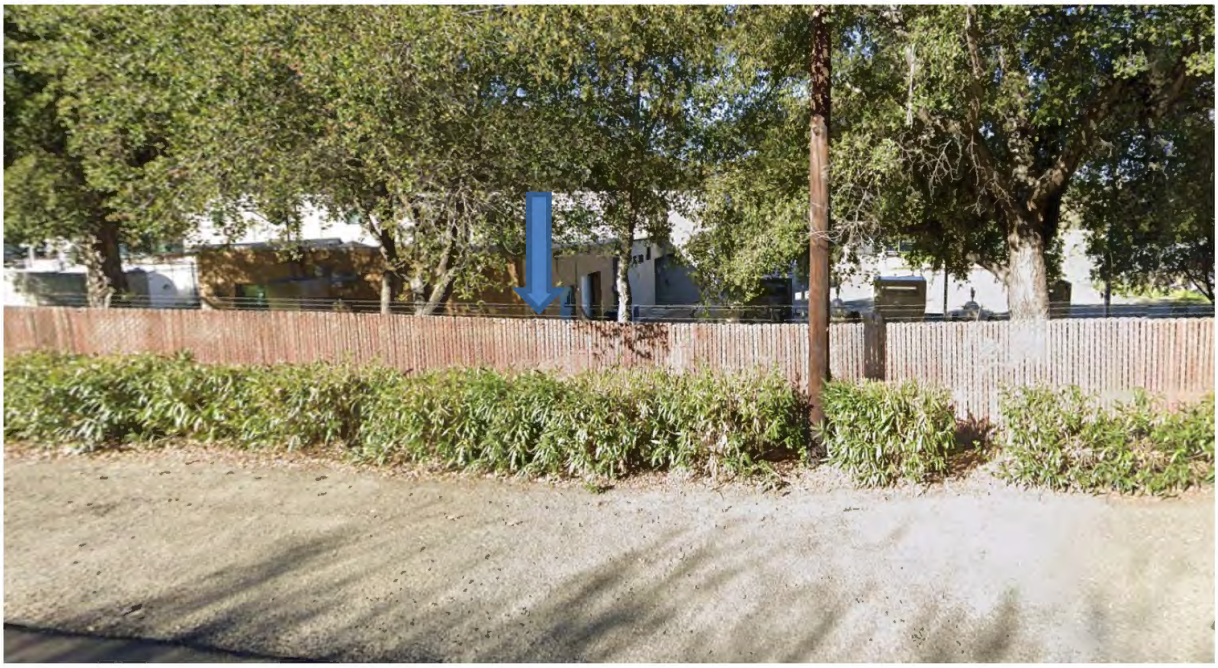
- **Aesthetics.** The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR evaluated the approved project's temporary construction impacts on scenic vistas based on views from the Ohlone Wilderness Trail and from the Flag Hill Trail. The EIR concluded that due to the approved project's distance from trail viewpoints (approximately 1.5 miles), construction activities at the plant site and spoils placement to the east of the plant would be barely visible and would not substantially affect scenic vistas of the valley floor and western hillside and ridgeline with the Sunol Regional Wilderness and Ohlone Wilderness areas. The EIR also concluded that construction activities adjacent to the plant would be partially visible from Calaveras Road (designated by Alameda County as a scenic road), but would occur below the hillside ridgelines and would be largely obscured by trees along Calaveras Road, and therefore would not impact

views of the valley floor and ridgeline or hills from Calaveras Road. Similarly, construction activities at the plant for the modified project would occur below the hillside ridgelines; would be largely obscured by trees along Calaveras Road; and would not impact views. However, staging activities at the former tree nursery site and electrical improvements at the San Antonio Pump Station would occur directly adjacent to Calaveras Road. Construction activities at the San Antonio Pump Station would occur over approximately three months, and would be partially obscured by existing trees and fencing at the pump station. Although construction staging use of the former tree nursey would occur for the four-year duration of the construction of the modified project, the former tree nursery site is at the same approximate elevation as Calaveras Road, and staging activities would not obscure views of the surrounding hillsides. During construction, SFPUC would implement its Standard Construction Measure #8 (Visual and Aesthetic Considerations) requiring the modified project site be maintained in a clean and orderly state (e.g., storing construction materials and equipment at designated staging areas and away from public view where possible) and returned to general pre-project condition at the completion of construction. Therefore, because travelers on Calaveras Road would only see these work and staging areas briefly in passing, because construction would be temporary (lasting four years), and because Standard Construction Measure #8 requires the work and staging areas be maintained in a clean and orderly state and restored to general pre-project condition at the completion of use, construction of the modified project would not substantially compromise the overall scenic vistas available from Calaveras Road. This aesthetics impact would remain less than significant for the modified project.

The EIR evaluated the impact of project construction and operation damaging scenic resources that contribute to a scenic public setting. It concluded that this impact would be significant due to removal of trees on the hillside where the flocculation and sedimentation basins would be situated at the plant. With implementation of Mitigation Measure BIO-1d (Prepare and Implement a Vegetation Restoration and Compensation Plan), this impact would be reduced to a less-than-significant level. Construction of the ozonation facility in the existing boundaries of the plant as part of the modified project would require the removal of approximately 30 trees; however, removal of these trees would be screened by intervening topography. and the trees along both Calaveras Road and Alameda Creek already largely obscure views of the plant as shown in **Figure 10**, and would therefore not degrade scenic resources that contribute to a scenic public setting. Limited tree trimming or removal of one or two trees may be required for installation of the power factor correction capacitor equipment panel at the San Antonio Pump Station, but this would not substantially change public views of the pump station site from Calaveras Road or damage scenic resources that contribute to a scenic public setting, because-as shown in **Figure 11**, the SFPUC facilities at this location are already fairly visible from Calaveras Road. Therefore, this impact would be less than significant for the modified project, and the mitigation measure required for the approved project would not be required for the modified project.

Figure 10: View from Calaveras Road Looking Southwest Toward Location of the Proposed Ozonation Facility

Figure 11: View from Calaveras Road Looking West Toward Approximate Location of the Power Factor Correction Capacitor Equipment Panel (Indicated by Blue Arrow) at the San Antonio Pump Station



The EIR evaluated the impact of project construction causing substantial degradation of the existing visual character or quality of the site and its surroundings. It concluded that, although construction activities at the plant and the spoils sites would be visible from limited locations along trails in the Sunol Regional Wilderness and Ohlone Wilderness areas, at the approximate viewing distance of 1.5 miles, these construction activities would not be distinguishable from existing facilities at the plant. In addition, although staging and spoils placement at nursery sites to the east of the plant for the approved project would be visible to bicyclists and motorists along Calaveras Road, views would be fleeting, and construction activities would be temporary, with these sites restored to their previous condition following completion of construction. Therefore, the EIR concluded that views of construction activities would not substantially degrade the visual character or quality of the site or experience traveling along Calaveras Road, and the impact was found to be less than significant. The modified project would involve construction of the ozonation and polymer feed facilities at the plant, which—similar to the approved project—would not be distinguishable from existing facilities at the plant as viewed from trails in the Sunol Regional Wilderness and Ohlone Wilderness areas. Construction staging at the former tree nursery site for the modified project would occur immediately north of the nursery sites to the east of the plant used for staging and spoils disposal under the approved project. Views of staging activity at the former tree nursery site would be fleeting to travelers on Calaveras Road, and temporary during construction. Although gravel that would be placed on the former tree nursery site would remain in place following construction, it would not appear substantially different from the existing gravel cover remaining on the site from nursery operations. Minor construction activity at the San Antonio Pump Station for electrical improvements would be short in duration (approximately three months), and would be visually similar to the light industrial appearance of the pump station yard and facilities as viewed from Calaveras Road. Therefore, given the similar locations and types of activities at the plant, the pump station, and former tree nursery site to those of the approved project, and for the reasons discussed above, the modified project would also not substantially degrade the visual character or quality of the site or experience traveling along Calaveras Road, and the impact would remain less than significant.

The EIR evaluated whether project construction could create a new source of substantial light and glare, and concluded that the impact would be less than significant because any use of nighttime lighting, which would be shielded and height-limited, would only be used within the project site boundaries or on roadways accessing the site, and would be directed away from the closest residences, which are both approximately 1.3 miles north of the plant. Construction of the modified project would not require night work. Therefore, the modified project would have no light and glare impacts during construction.

The EIR evaluated the approved project's operational impacts on scenic vistas based on views from the Ohlone Wilderness Trail and from the Flag Hill Trail. Views from these locations include the existing plant and the existing adjacent nurseries. The EIR concluded that due to the approved project's distance from trail viewpoints, new development at the plant and spoils placement to the east of the plant would be barely visible, and scenic vistas of the valley floor and western hillside and ridgeline with the Sunol Regional Wilderness and Ohlone Wilderness areas would not be substantially affected. Therefore, the impact of operations on scenic vistas was found to be less

than significant. Because the modified project involves the addition of ozonation and polymer feed facilities on the edges of the existing plant site, which would appear generally similar to the existing plant facilities in character and scale when viewed at a distance, the permanent appearance of the modified project would similarly not have substantial adverse effects on scenic vistas, and this impact would remain less than significant.

The EIR evaluated the impact of operations on the visual character or quality of the site and its surroundings. It concluded that when viewed from area hiking trails and Calaveras Road, the proposed structures would appear similar in character and scale to the existing plant structures, and therefore would not substantially degrade the area's visual character or quality of the site and its surroundings. The EIR concluded the overall visual qualities of the hillsides would remain generally unchanged because the facilities would not block a substantial area of the hillside, and would be largely located in an area where the topography has already been altered during previous expansion of plant facilities. Because the proposed new facilities (ozonation and polymer feed structures and electrical infrastructure) would also appear similar in character and scale to the existing facilities and structures, the modified project would also not substantially degrade the area's visual character or quality of the site and its surroundings. Therefore, this impact would remain less than significant.

Finally, the EIR evaluated whether the approved project would create a substantial new source of light and glare from operations. It noted that nighttime lighting at the plant site is visible from a private ranch residence approximately 1.3 miles to the northwest and by nighttime drivers on Calaveras Road. The approved project added additional nighttime lighting around the perimeter of the new facilities, with this lighting limited as much as possible to those areas where it is necessary for safety and security. In accordance with the Alameda Watershed Management Plan, permanent lighting at the plant is directed downward, and sited and shielded so that it is not highly visible or obtrusive. The EIR therefore concluded that additional lighting of the approved project would not create a substantial new source of substantial light. Similar to the approved project, the modified project would install lighting around the proposed new ozonation and polymer feed facilities to provide safety and security. This lighting would be subject to the same Alameda Watershed Plan requirements that it be directed downward, and sited and shielded. In addition, the modified project would include solar panels on the roof of the 9,000-square-foot ozone generation building. This would not create a substantial new source of glare from public vantage points; because of the relatively small size of the structure, they are unlikely to be distinguishable from trails in the Sunol Regional Wilderness and Ohlone Wilderness areas (at a distance of 1.5 miles). As described above, existing trees along Calaveras Road and Alameda Creek would screen views of the ozonation facility from Calaveras Road. Further, the ozone generation building would have a low slope with parapet walls that would be higher than the solar panels, and would screen views of the panels from lower and equal elevations. Therefore, this impact would remain less than significant for the modified project.

In summary, the modified project would not result in new significant aesthetics impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe aesthetics impacts than those identified in

Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; and would not require new aesthetics mitigation measures.

- **Population and Housing.** The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR concluded that the approved project would result in less-than-significant impacts with regard to population growth due to an increase in employment opportunities during construction. As with the approved project, the modified project would temporarily increase employment opportunities in the local area during project construction. The modified project would require up to 170 workers during the construction period, which is expected to last approximately four years. However, this temporary employment opportunity would not substantially exceed what is normally available to construction workers in the region. Therefore, it is expected that construction workers would be drawn from the existing regional labor force; and that most, if not all, of the construction workers associated with the modified project would already reside in the San Francisco Bay Area, and would not create a substantial demand for housing that could displace existing housing units or people, or create demand for additional or replacement housing. Therefore, this impact would remain less than significant for the modified project. The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR found no operational impacts related to population and housing. Similarly, operation of the modified project would not require additional staff at the plant, and would not create demand for additional or replacement housing. Therefore, the modified project would not result in new significant impacts related to the population and housing that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir EIR; would not result in more severe impacts than those identified in the EIR; and would not require new mitigation measures.

- **Transportation and Circulation.** The Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR determined that the approved project's estimated 476 daily trips for construction workers and delivery trucks would not substantially impact traffic circulation along Interstate 680 or Calaveras Road. The EIR estimated the approved project would also require up 140 trips per day on Calaveras Road to one or more reserve spoils disposal sites, which was considered a potentially significant impact. The EIR concluded that this impact would be reduced to a less-than-significant level through implementation of Mitigation Measure TRANS-1 (Preparation and Implementation of Traffic-Control Plan), which would require preparation and implementation of a project-specific traffic control plan that would limit hauling trips on Calaveras Road to non-peak hours to avoid traffic impacts to non-project-related traffic, and limit haul trucks from using Interstate 680. During months of concurrent construction for the ozonation facility, polymer feed facility, existing treatment facility repairs, and electrical improvements at the former tree nursery site and San Antonio Pump Station, the modified project would require a maximum of 694 daily trips, including 360 worker trips, 230 delivery trucks trips, and 104 haul trips. Although this number is slightly higher than the approved project's 616 daily trips for worker, delivery, and haul trips, the maximum number of daily haul and delivery trips would be less for the modified project than for the approved project. Unlike the approved project, haul trips for the modified project would include travel on Interstate 680 in addition to Calaveras Road. Average daily trips on Interstate 680 near the State Route 84 West/Calaveras Road interchange are

approximately 123,000 vehicle per day.[39] Therefore, the temporary construction-related trips from the modified project would not substantially impact traffic circulation because they would be small in number in the context of existing traffic volumes in the vicinity. Further, as required by SFPUC Standard Construction Measure #4 (Traffic), the modified project would implement traffic control measures sufficient to maintain traffic circulation during construction, such as flaggers and/or construction warning signage of work ahead, and scheduling truck trips during non-peak hours to the extent feasible. Therefore, the modified project would not substantially affect traffic circulation during construction; this impact would remain less than significant for the modified project; and the EIR's mitigation measure applicable to the approved project would not be required for the modified project.

The EIR found that delivery and hauling trucks, which are larger, have slower speeds, and have wider turning radii than automobiles, could present a hazard to existing vehicular traffic and bicyclists during the approved project's construction. The EIR concluded that potentially significant traffic safety hazards for bicyclists and autos associated with the approved project's delivery and hauling truck trips could be mitigated to a less-than-significant level through implementation of Mitigation Measure TRANS-1 (Preparation and Implementation of Traffic Control Plan), which would specify measures to prevent conflicts between construction traffic and non-construction traffic on Calaveras Road, including providing advance warning signs, flaggers, or equivalent measures to slow traffic at project access points, and limiting spoils hauling to non-peak hours. Although the modified project would generate fewer daily delivery and haul truck trips (334) than the approved project (406), construction traffic for the modified project could also cause potential traffic safety hazards for bicyclists and autos. However, as stated above, project-specific traffic control measures would be required as part of SFPUC Standard Construction Measure #4, which would require similar traffic controls such as flaggers, construction warning signage, and scheduling truck trips to non-peak hours to reduce roadway safety hazards for bicyclists and autos. Therefore, the modified project impacts would be less than significant, and the EIR's mitigation measure applicable to the approved project would not be required for the modified project.

The EIR concluded that the approved project's impacts on traffic during operation would be less than significant because vehicle trips related to operations and maintenance, including deliveries, would result in the permanent addition of fewer than one average daily trip. For the same reason, this impact would also be less than significant for the modified project because operation and maintenance activities for the modified project would not differ substantially from existing conditions, especially given that operation of the modified project would not require new permanent staff. There would be a small increase in chemical deliveries for operation of the ozonation facility and polymer feed facility, approximately 20 per month, which would equate to one trip per weekday. This would not substantially impact traffic, because when combined with the increase in trips from the approved project, it would result in an increase of fewer than two average daily trips, which would amount to a negligible increase in local traffic.

[39] California Department of Transportation, 2020 Annual Average Daily Traffic Volumes for California state highways, available at https://dot.ca.gov/programs/traffic-operations/census, accessed May 12, 2023.

The EIR concluded that project construction would not result in inadequate emergency access because it would not occur in the rights-of-way of public roadways; would not considerably affect traffic circulation along Calaveras Road or interstate 680; and accordingly, would not pose an obstacle to emergency-response vehicles. For the same reasons, this impact would also be less than significant for the modified project.

Similar to the approved project, the modified project would have no impacts related to a change in air traffic patterns, inadequate parking capacity, or with regard to conflicts with adopted policies, plans, or programs regarding public transit, roadway, bicycle, or pedestrian facilities. The modified project does not involve changes to the design or operation of transportation facilities or the installation of features that would interfere with airspace. The modified project includes designated on-site construction staging areas that would provide adequate parking for construction workers and other construction vehicles. Therefore, parking demand would be contained within the modified project site, and would not require parking along Calaveras Road during project construction. Following project completion, there would not be an increase in permanent on-site employees; and accordingly, no increase in parking demand. There is no bus or other transit service provided along Calaveras Road or I-680 in the vicinity of the project site; therefore, the project would not conflict with any adopted transit policies during either construction or operation. Calaveras Road is not part of the designated Alameda County countywide bicycle network; therefore, the project would not permanently conflict with any adopted bicycle policies.

In summary, the modified project would not result in new significant transportation and circulation impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe transportation and circulation impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new transportation and circulation mitigation measures.

- **Noise and Vibration.** The approved and modified projects are not within 2 miles of a public airport or public use airport, and are not in an area covered by an airport land use plan. In addition, they are not in the vicinity of a private airstrip. Therefore, these significance criteria are not applicable to the approved project and the modified project.

  The EIR evaluated impacts from construction noise to two sensitive receptors: 1) a private ranch residence approximately 1.3 miles northwest of the plant and 1,360 feet west of Calaveras Road, and 2) the SFPUC watershed keeper's residence approximately 1.3 miles northeast of the plant and 225 feet east of Calaveras Road. The analysis found that noise impacts would not exceed Alameda County Noise Ordinance standards during non-exempt hours for most activities; however, the EIR determined that pile driving during pipeline construction would exceed these standards at the ranch residence. It concluded that this impact would be reduced to a less-than-significant level through implementation of Mitigation Measure NOI-1 (Implementation of Noise Controls), which limited pile driving to daytime hours, and limits construction noise to 50 dBA, which reduced this impact to a less than significant level. The modified project would not require nighttime construction work, and construction noise impacts are exempt from the Alameda Noise

Ordinance standards during daytime hours (between 7 a.m. and 7 p.m. Monday through Friday, and between 8 a.m. and 5 p.m. Saturday and Sunday). Weekend work may occasionally be required for select construction activities during critical periods such as concrete pours or during shutdowns to tie into existing facilities. Under the modified project, the nearest construction activities to these sensitive receptors would be electrical upgrades at the San Antonio Pump Station, which would occur within approximately 350 feet of the watershed keeper's residence over an approximately three-month construction duration. The electrical upgrades involve minimal ground disturbance, and construction equipment operation would be intermittent over this three-month period; construction activities that would generate the most noise include grading and excavation. Based on analysis completed for the approved project, at a distance of 350 feet from the San Antonio Pump Station, the watershed keeper's residence would experience noise from the modified project's construction activities at levels of approximately 58 A-weighted decibels [dBA][40], which would not exceed Alameda County standards for evening (58 dBA). Construction activities at the plant that would generate the most noise include pile driving, pile drilling, grading, and earthmoving. Based on analysis completed for the approved project, at a distance of 1.3 miles from the plant, both the ranch residence and watershed keeper's residence would not experience noise from construction activities at the plant at levels that exceed Alameda County standards for evening (58 dBA) or nighttime (53 dBA). As noted above, the modified project would not require nighttime construction work, and construction noise impacts are exempt from the Alameda Noise Ordinance standards during daytime hours; therefore, the modified project would not result in construction noise levels at sensitive receptors in excess of the Alameda County Noise Ordinance standards. In accordance with SFPUC Standard Construction Measure #5 (Noise), the modified project would implement measures to minimize noise disruption to nearby sensitive receptors during construction, such as employing best available noise control technologies on equipment and locating stationary noise sources (e.g., generators) away from sensitive receptors. Therefore, noise impacts resulting from construction of the modified project would be less than significant, and the EIR's mitigation measure applicable to the approved project would not be required for the modified project.

The EIR evaluated temporary exposure of persons to excessive groundborne vibration from use of pile-driving equipment, large and small bulldozers, loaded trucks, and jackhammers. The analysis concluded that vibration from use of this equipment during construction of the approved project would not exceed the 0.012 in/sec peak particle velocity (PPV) threshold level for noticeability or annoyance at either the private ranch residence or the SFPUC watershed keeper's residence, which is 300 feet from Calaveras Road. The modified project would also use vibration-generating construction equipment, including backhoes and compactors, in similar locations at the plant, former tree nursery site, and San Antonio Pump Station, and the modified project's truck traffic on Calaveras Road would also pass within 300 feet of the nearest residence, as with the approved project. Because of the similarity of these circumstances, it can be reasonably presumed that groundborne vibration from the modified project's construction activities would also not exceed the 0.012 in/sec PPV threshold level for noticeability or annoyance at either of the residences in the area, and this impact would remain less than significant.

[40] A-weighted decibel (dBA) is an expression of the relative loudness of sounds as perceived by the human ear.

The EIR evaluated the approved project's operational noise impacts on the two identified sensitive receptors. It was determined that the primary new sources of operational noise would be the addition of 11 new chemical feed pumps, an emergency generator, and a 2,000 kilovolt-ampere transformer at the plant, which would have a combined sound level of 71 dBA at 50 feet. With the ranch residence approximately 6,800 feet from the plant and the SFPUC watershed keeper's residence approximately 8,200 feet from the plant, a sound level of 71 dBA at 50 feet would attenuate to less than 30 dBA at both locations. It was therefore concluded that increased noise from operation of approved project facilities would not exceed Alameda County noise standards, and the impact was found to be less than significant. The primary noise-generating sources of the modified project would be a cooling water pump station in the ozone generation building, feed pumps at the polymer feed facility, and a 21-kilovolt transformer outside the northeastern corner of the ozone generation building. The pumps would be housed in buildings. The treatment facilities constructed as part of the modified project would be south of the new sources of operational noise added under the approved project, and would be further distanced from the ranch residence and SFPUC watershed keeper's residence. Using noise levels for similar equipment analyzed in the EIR, the combined noise of the pumps and transformer would be approximately 70 dBA at 50 feet. When combined with the operational noise increase from the approved project (71 dBA at 50 feet), the modified project's noise would attenuate to less than 40 dBA at both the ranch residence and SFPUC watershed keeper's residence. The automatic voltage regulator, bypass switch, and power factor correction capacitor equipment panel installed as part of the electrical upgrades at the San Antonio Pump Station would not generate operational noise. Therefore, the increased noise from operation of the modified project facilities would not exceed Alameda County noise standards, and the impact would remain less than significant for the modified project.

In summary, the modified project would not result in new significant noise and vibration impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe noise and vibration impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new noise and vibration mitigation measures.

- **Air Quality (Including Greenhouse Gases[41]).** The Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir EIR evaluated whether construction of the approved project would conflict with or obstruct implementation of an applicable air quality plan. As discussed below, construction activities of the approved project would generate emissions of criteria air pollutants. The Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines at the time the EIR was prepared recognized that construction equipment emits ozone precursors, but indicated that such emissions were included in the emission inventory that served as the basis for regional air quality plans, and that construction emissions were not expected to impede the attainment or maintenance of ozone standards in the Bay Area. The EIR also evaluated whether the approved project's construction emissions of particulate matter equal to or less than 10 micrometers in diameter (PM_{10}), particulate matter equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$),

[41] Greenhouse Gas Emissions was not added as a CEQA checklist topic until after completion of Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; however, EIR evaluated impacts from greenhouse gases as part of the air quality analysis.

reactive organic gases (ROG), and nitrogen oxides (NO_X) could violate air quality standards. The analysis determined that excavation, grading, vehicle travel on paved and unpaved surfaces, and vehicle exhaust during construction would generate fugitive dust (including PM_{10} and $PM_{2.5}$) and other criteria pollutants as a result of construction activities. Combustion emissions from heavy equipment and delivery/haul trucks, and worker commute vehicles would result in emissions of ROG and NO_X. The EIR did not estimate the approved project's construction emissions because BAAQMD did not have a significance threshold for construction-related air pollutant emissions at the time the EIR was prepared, but noted BAAQMD recommended implementation of measures to reduce PM_{10} emissions. The EIR concluded that this impact would be less than significant, because with the implementation of Mitigation Measure AIR-2a (Implementation of Dust Control Plan), Mitigation Measure AIR-2b (Implementation of BAAQMD Dust Control Measures), and Mitigation Measure AIR-2c (Implementation of BAAQMD Exhaust Control Measures), construction-related emissions would not violate any air quality standards or contribute substantially to an existing or projected air quality violation in accordance with BAAQMD standards. The modified project would generate fugitive dust, ROG, and NO_X emissions from construction of water treatment facilities over a similar duration as the approved project; however, the modified project's construction would be smaller in scale and intensity than the approved project. The modified project would result in the emissions of criteria pollutants in amounts that would be below current BAAQMD CEQA significance thresholds for construction emissions, as shown in Table 5. In addition, the modified project would implement SFPUC Standard Construction Measure #2 (Air Quality), which requires compliance with the basic construction measures recommended by the BAAQMD. The BAAQMD basic construction measures include watering exposed (unpaved) ground surfaces two times per day, covering trucks transporting soils and loose materials, minimizing idling times for construction equipment, and re-paving or re-vegetating exposed surfaces as soon as possible, among other measures that serve to minimize criteria air pollutant and fugitive dust emissions from construction activities, thereby further reducing the emissions of air quality pollutants. Therefore, this impact would be less than significant for the modified project, and the EIR's mitigation measures applicable to the approved project would not be required for the modified project.

Table 5: Average Daily Emissions of Criteria Pollutants During Construction

Pollutant	Modified Project Construction Emissions (lbs/day)	Project Construction Thresholds (lbs/day)
PM_{10}	5.8	82
$PM_{2.5}$	2.1	54
NO_x	31.8	54
ROG	3.1	54

Notes:

NO_X = nitrogen oxides
PM_{10} = particulate matter equal to or less than 10 micrometers in diameter
$PM_{2.5}$ = particulate matter equal to or less than 2.5 micrometers in diameter
ROG = reactive organic gases

Source: Modeled by AECOM in 2023.

The EIR also evaluated whether construction of the approved project would expose sensitive receptors to diesel particulate matter. The analysis focused on two categories of diesel particulate matter emissions during construction: off-road construction equipment at the plant and the spoil disposal sites; and on-road construction vehicles traveling along Calaveras Road. The only sensitive receptors that could be exposed to diesel particulate matter due to off-road construction equipment are the residents at the watershed keeper's house and private ranch residence, both approximately 1.3 miles from the plant. At these distances, potential health risks associated with diesel particulate matter emitted from off-road construction equipment would be minimal, because the long distance would allow tailpipe emissions to disperse to non-measurable levels at these residences. To evaluate exposure from on-road construction vehicles, the EIR estimated diesel truck trips passing by the watershed keeper's residence during the 36-month construction period. It then estimated that the diesel particulate matter cancer risk at this residence would be 0.25 per million, which is below the cancer risk of 1 in a million, or less over a 70-year-lifetime exposure period, which the BAAQMD considers an insignificant risk. Based on this analysis, the EIR concluded that the approved project's impact would be less than significant. Construction of the modified project's electrical upgrades at the San Antonio Pump Station, which would occur within 350 feet of the watershed keeper's residence, would occur over three months (1/12 of the duration of the approved project), and would require intermittent operation of equipment that would emit diesel particulate matter, such as a diesel generator, compactor, and backhoe, during this period. In addition, the modified project would require 72 fewer daily delivery and haul truck trips than the approved project. Further, the modified project would implement SFPUC Standard Construction Measure #2 (Air Quality), which requires compliance with the basic construction measures recommended by the BAAQMD (described above), including minimizing idling times to reduce diesel particulate matter emissions. Therefore, the modified project would not increase diesel particulate matter cancer risk at this residence relative to the approved project, and this impact would remain less than significant.

The EIR evaluated whether exposure to emissions from construction of the approved project could create objectionable odors. The analysis found that decomposition of organic material exposed during excavation of soil could release hydrogen sulfide gas, which could cause odor impacts at nearby receptors (ranch residence and watershed keeper's residence). The EIR concluded that, given the long distance between the sensitive receptors (approximately 1.3 miles) and the proposed creek crossing where excavation would occur, construction-related nuisance odors associated with the proposed tunneling would not adversely affect these receptors. Therefore, potential impacts related to odors from the approved project's construction were found to be less than significant. The modified project would not include tunnel excavation, and therefore would not be likely to encounter hydrogen sulfide gas, and would not involve construction activities expected to create objectionable odors. Therefore, this impact would remain less than significant.

The EIR evaluated whether the operation of the approved project would be inconsistent with air quality plans by resulting in population and/or employment growth that would exceed growth estimates included in the applicable air quality plan. It concluded that this impact would be less than significant because the approved project was designed to serve anticipated demand

consistent with planned growth, and would therefore be consistent with air quality plans. The modified project would not increase the treatment capacity of the plant, and therefore would not contribute to growth that would conflict with an applicable air quality plan. The EIR evaluated whether operation and maintenance of the proposed facilities could violate or contribute to an existing violation of air quality standards for emissions of ROG, NO_X, and PM_{10}. The analysis estimated annual operational emissions of ROG, NO_X, and PM_{10} from an increase of one to five additional chemical delivery truck trips per week, and one to two additional deliveries per year of diesel fuel, as well as from periodic testing (up to 50 hours per year) of the internal combustion engine for a 2,000-kilowatt emergency backup generator. The EIR concluded that because these emissions of ROG, NO_X, and PM_{10} would be less than 0.5 ton per year and well below the BAAQMD's 15 tons per year operational significance threshold at the time for ROG, NO_X, and PM_{10}, the impact would be less than significant. As part of the modified project, operation of the ozonation and polymer feed facilities would require deliveries of chemicals, approximately one delivery per weekday. The modified project proposes a new 150-kilowatt backup generator, which would require up to 50 hours per year of testing. The modified project's emissions from mobile sources (from deliveries) and stationary sources (from emergency generator testing), inclusive of operations from the approved project combined with the increased operations under the modified project, would be less than 1 ton per year for each criteria air pollutant. Therefore, the modified project's operational emissions would be below the BAAQMD's current operational significance thresholds of 15 tons per year for PM_{10} and 10 tons per year for ROG, NO_X, and $PM_{2.5}$; therefore, this impact would remain less than significant.

The EIR concluded that the impact of generation of odors during the approved project's operation would be less than significant because the two closest residences (approximately 1.3 miles) would be too far from the plant to detect potential odor from small amounts of ammonia vapor that would be emitted during deliveries of ammonia to the two above-ground ammonia storage tanks at the plant. Under the modified project, the proposed ozonation facility would involve deliveries and use of liquid oxygen, liquid nitrogen, and calcium sulfate. Polymer flocculants would be used at the polymer feed facility. Because all these substances are odorless, operation of the modified project would not result in a significant impact from odors.

The EIR evaluated whether implementation of the approved project would conflict with the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020. The EIR concluded that, due to the approved project's small contributing percentage (0.0015 percent) of short-term construction emissions in the state, and with the SFPUC's implementation of greenhouse gas reduction actions, greenhouse gas emission impacts would be considered less than significant, and the approved project would not conflict with the state's greenhouse gas reduction goals. The EIR also concluded that the approved project's operational greenhouse gas emissions would not have a significant impact on the environment because emissions from vehicle trips associated with operation and maintenance activities and new stationary sources would not exceed the BAAQMD significance threshold, and because SFPUC would continue to implement greenhouse gas reduction measures. Similarly, the modified project's operational emissions from vehicle trips and new stationary sources would not exceed the BAAQMD significance threshold, and City and County of San Francisco and SFPUC greenhouse gas reduction actions are ongoing, and would still

occur. The modified project would comply with the applicable City and County of San Francisco regulations relevant to greenhouse gas reduction, including the Healthy Air and Clean Transportation Ordinance (San Francisco Environment Code, section 403), Clean Construction Ordinance (San Francisco Environment Code, sections 2505 and 2506), Green Building Requirements for City Buildings (San Francisco Environment Code, chapter 7), Construction and Demolition Debris Recovery Ordinance (San Francisco Environment Code chapter 14, section 1402), and Regulation of Diesel Backup Generators (San Francisco Health Code, article 30).[42] Therefore, the modified project would not conflict with state, regional, or local greenhouse gas reduction plans, and this impact would remain less than significant.

In summary, the modified project would not result in new significant air quality and greenhouse gas impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe air quality and air quality and greenhouse gas impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new air quality and air quality and greenhouse gas mitigation measures.

- **Wind and Shadow.** The Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR determined that the wind and shadow impact criteria were not applicable because the approved project involved the construction of new structures similar in size and height to existing SFPUC buildings in the area that would not be tall or massive enough to alter wind patterns in the vicinity, or to create substantial new shadows that would affect outdoor recreation facilities or other public areas. For these same reasons, the wind and shadow criteria are also not applicable to the modified project.

- **Recreation.** The approved and modified projects would not increase the use of existing neighborhood and regional parks or other recreational facilities, and would not involve the construction or expansion of existing recreational facilities. Therefore, these significance criteria are not applicable to the approved project and the modified project.

  The Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR evaluated whether the approved project would temporarily degrade recreational use of Calaveras Road during construction. It determined that although disruption of Calaveras Road would be temporary and intermittent, impacts on access to the Sunol Ohlone Regional Park, Ohlone Regional Wilderness areas, and on recreational bicyclists using Calaveras Road from delivery and haul truck traffic would be potentially significant. The EIR found that delivery and hauling trucks, which are larger, have slower speeds, and have wider turning radii than automobiles, could present a hazard to existing vehicular traffic and bicyclists during the approved project's construction. The EIR concluded that implementation of a project-specific Traffic Control Plan (Mitigation Measure TRANS-1) would reduce the impact to a less-than-significant level by lessening potential construction delivery and haul truck traffic effects through use of advance warning signs along Calaveras Road north and south of the project site, and use of flashing yellow

[42] SFPUC, San Francisco Planning Department Compliance Checklist Table for Greenhouse Gas Analysis prepared for the modified project, May 17, 2023.

lights and/or flaggers warning traffic throughout the construction period. The modified project would generate fewer daily delivery and haul truck trips (334) than the approved project (406). As required by SFPUC Standard Construction Measure #4 (Traffic), the modified project would implement similar traffic control measures to maintain traffic circulation during construction, such as flaggers, construction warning signage of work ahead, and scheduling truck trips to non-peak hours, which would maintain potential impacts from the modified project's construction traffic on recreational access and bicycle use of Calaveras Road at less than significant levels. Therefore, this impact would be less than significant for the modified project, and the EIR's mitigation measures applicable to the approved project to mitigate recreational use impacts would not be required for the modified project.

In summary, the modified project would not result in new significant recreation impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe recreation impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new recreation mitigation measures.

- **Utilities and Service Systems.** As with the approved project, the modified project would not involve wastewater generation or treatment; would not require additional water supply resources; and would not require the construction of new or expanded utility systems—no impact would occur with respect to these criteria. Operation and staffing levels of the plant would not change under the modified project. Replacement of an existing sanitary holding tank would not generate additional demand for wastewater treatment capacity. The only new incidental use of potable water proposed by the modified project would be for the ozone generation building restroom and approximately 11 new emergency eyewash safety showers, which would not result in an increase in demand that would necessitate the construction of additional water supply facilities.

  The EIR evaluated whether construction-related solid waste disposal from the approved project could exceed permitted landfill capacity. It determined that although an average of 30 yards per week of landfill-bound waste would be generated during the three-year construction period (a total of 4,680 cubic yards), the Vasco Road Sanitary Landfill and Altamont Landfill and Resource Recovery could together accommodate 3,300 cubic yards of excavated materials per day or 4,500 tons per day, which is far greater than the amount the approved project would generate daily. The EIR therefore concluded that this impact would be less than significant. The modified project would generate approximately 27,600 cubic yards of construction waste and excavated soils during construction, which would be an average of 378 cubic yards per week based on assumed maximum daily hauling rates. Approximately 25,000 cubic yards of this material would be excavated soil, a portion of which may be suitable for use as backfill during construction of the modified project or for other reuse, and may not require landfill disposal. Regardless, the conservative estimate of 378 cubic yards per week would be well within the 3,300 cubic yards per day of these two landfills. Therefore, the modified project would not exceed permitted landfill capacity, and this impact would remain less than significant.

The EIR evaluated the impact of construction activities that could inadvertently conflict with regional and local utilities, including the SFPUC's existing underground water service pipelines and culverts extending under Calaveras Road into the nursery spoils and staging areas east of the plant, and the northern spoils site near Interstate 680. The EIR concluded that this impact would be reduced to a less-than-significant level through compliance with the California Occupational Safety and Health Administration Construction Safety Orders for excavation and trenching; compliance with utility notification requirements under Article 2 of the California Government Code Section 4216; and implementation of Mitigation Measure UTL-2 (Avoid Conflicts with Existing Utilities and Coordinate Efforts with Affected Utilities). The modified project would also comply with California Occupational Safety and Health Administration and Article 2 requirements. The modified project would not require disruption or relocation of other utilities because no other non-SFPUC utilities are present in the areas where ground-disturbing activities would occur. Therefore, this impact would be less than significant for the modified project, and the EIR's mitigation measures applicable to the approved project to mitigate utility impacts would not be needed to reduce impacts of the modified project.

Therefore, with respect to utilities and service systems, the modified project would not result in new significant impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new mitigation measures.

- **Public Services.** Similar to the approved project, the use of construction equipment and traffic generated by construction workers commuting to the modified project's construction sites could increase the potential for accidents in the modified project area. However, any increase in the number of accidents during construction (no new staff would be added for operation) of the modified project would not be expected to exceed the capacity of existing emergency response services, local medical facilities, or other services to the extent that new emergency response facilities would need to be constructed. As with the approved project, operation of the modified project would not increase the local population, or otherwise affect the need for fire protection, police protection, schools, parks, or other public services (the construction of which could result in impacts on the environment), given that it would not result in an increase of staff at the plant or substantially change operations and maintenance activities at the plant. Therefore, no expansion of such services, causing adverse physical impacts, would occur. As with the approved project, the modified project's impact related to public services would be less than significant. Therefore, with respect to public services, the modified project would not result in new significant impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new mitigation measures.

- **Geology and Soils.** The approved and modified projects do not include septic tanks or alternative wastewater disposal systems; therefore, this significance criterion is not applicable to the approved project nor to the modified project.

The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR identified the potential for construction-triggered landslides at the location of the flocculation and sedimentation basin on the western side of the plant, adjacent to where a landslide of approximately 500 feet in length and 400 feet in width occurred. However, the EIR concluded that support and protection measures that were incorporated into the project design would maintain the stability of slopes adjacent to newly graded access roads and project structures during construction, maintaining the impact of slope instability at a less-than-significant level. The polymer feed facility would be near the flocculation and sedimentation basin, which is adjacent to the landslide area identified in previous site-specific geotechnical investigations and assessments of geologic hazards cited in the EIR. However, SFPUC would design the polymer feed facility to resist overturning, sliding, and uplift in accordance the California Building Code and SFPUC General Seismic Design Requirements.[43] With adherence to appropriate design standards, impacts related to slope stability during construction would be less than significant for the modified project.

Ground-disturbing construction activities could also result in erosion and loss of topsoil. The EIR analyzed this impact under Hydrology and Water Quality (see corresponding analysis below).

The EIR concluded that operation of the approved project would have less-than-significant impacts related to the exposure of seismic risks (surface fault rupture, ground shaking, ground failure, and landslides), from expansive soils, to causing slope instability, and to causing a substantial change of topography or of any unique geologic or physical feature of the site. The Calaveras Fault is approximately 0.4 mile east of the plant. Although the Sinbad fault is estimated to underlie the plant, fault hazard studies concluded that this fault is not active, and has a low potential to cause surface fault rupture.[44,45] Liquefaction risk was determined to be low and less than significant for the approved project because geotechnical borings found stiff to very stiff clays and dense to very dense gravels and sands at the locations of proposed facilities.[46] Prior geotechnical investigation at the plant identified soil types that exhibit a low to moderate shrink/swell potential.[47, 48] Because the modified project facilities would be constructed in the same general areas assessed during geotechnical investigations for the approved project, the liquefaction risk would also be less than significant for the same reasons as the approved project. Because the modified project would construct the ozonation and polymer feed facilities within the confines of the plant (where the risk of surface rupture was found to be low), and the design of the structures would adhere to the SFPUC General Seismic Design Requirements and Alameda Watershed Management Plan policies regarding seismic and geological hazards, the impact of fault rupture during operation of the modified project would also be less than significant. All of the modified project's proposed structures would be designed consistent with the SFPUC's General Seismic Design Requirements, which meet or exceed the International Building Code, California

[43] Stantec, Sunol Valley Water Treatment Plant Flocculant Aid Polymer Project Conceptual Engineering Report, May 26, 2019.
[44] WLA, Technical Memorandum, Sunol Valley Treatment Plant, Fault Hazards Review and Ground Motion Estimate, May 17, 2004.
[45] WLA, Summary of Observations from Geologic Trenching at the New Irvington Tunnel, Alameda West Portal, Sunol Valley, letter report presented in Appendix G, 2007.
[46] AGS, Revised Draft Preliminary Report Geotechnical Study for the Sunol Valley Water Treatment Plant and Treated Water Reservoir, July 2008.
[47] AGS, Draft Report Geotechnical Study, Sunol Valley Water Treatment Plant, 2008.
[48] ENGEO, Sunol Valley Water Treatment Plant Ozonation Geotechnical Interpretive Report, Revised-Final, March 26, 2021.

Building Code, and the Universal Building Code. As with the approved project, the modified project would be consistent with the requirements of the Alameda Watershed Management Plan because the SFPUC would be required to implement policies S5 and S6 from the plan, which require the proposed facilities to be inspected following earthquakes or slope failures to assess their stability and integrity, and to be repaired or monitored as needed to prevent geologic hazards. The EIR also concluded that the approved project would not result in a substantial change in natural topography because the plant site had already been disturbed and altered for existing facilities. Because the modified project would also be on disturbed and altered land, this impact would remain less than significant. Therefore, the modified project would not result in a substantial adverse effect related to seismic risks and geologic hazards.

In summary, the modified project would not result in new significant impacts related to geology and soils that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new mitigation measures.

- **Hydrology and Water Quality.** Like the modifed project, the approved project is not in an area that would be subject to inundation by seiche or tsunami; therefore, this significance criterion does not apply to the modified project. Similarly, neither the approved project nor the modified project involve placing housing in a 100-year flood hazard area, and therefore this criterion is not applicable.

  The EIR evaluated the impact of project construction degrading the water quality of Alameda Creek and wetlands as a result of erosion and sedimentation, or a hazardous materials release as a result of earthmoving, construction dewatering, and handling of hazardous materials. The EIR noted that the approved project would be subject to compliance with applicable regulatory requirements, and preparation and implementation of a Storm Water Pollution Prevention Plan as part of the permitting process. Further, the SFPUC would implement the policies prescribed in the Alameda Watershed Management Plan, and would implement the measures outlined in their Standard Operating Procedure for Erosion Control for all dewatering. These measures would help minimize the potential for impacts to water quality during construction, but not to a less-than-significant level. The EIR concluded that, in addition to these requirements, the impact would be reduced to a less-than-significant level through implementation of Mitigation Measure HYD-1a (Construction Water Quality Best Management Practices), HYD-1b (Management of Dewatering Effluent Discharges), HAZ-1b (Preparation of a Construction Risk Management Plan), AIR-2a (Implementation of a Dust Control Plan), and AIR-2b (Implementation of BAAQMD Dust Control Measures). These measures require that the Storm Water Pollution Prevention Plan include various best management practices, sediment and erosion controls, waste handling and materials pollution controls, and inspection and maintenance of implemented controls; preparation of a site-specific dewatering plan; preparation of a Construction Risk Management Plan to address waste handling and materials pollution control; and implementation of dust control measures.

  Construction of the modified project would involve similar construction activities that could indirectly affect the water quality of Alameda Creek through sedimentation and accidental

discharge of hazardous materials; however, unlike the approved project, the modified project does not require work in the creek, and would not require dewatering. During construction of the modified project, the SFPUC would require implementation of its Standard Construction Measure #6 (Hazardous Materials) to prevent the release of hazardous materials used during construction (such as storing them pursuant to manufacturer recommendation, maintaining spill kits on site, and containing any spills that occur to the extent safe and feasible followed by collection and disposal in accordance with applicable laws), as well as its Standard Construction Measure #3 (Water Quality), which requires that erosion and sedimentation controls be tailored to the modified project site (such as fiber rolls and/or gravel bags around storm drain 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), and it requires preparation of a Stormwater Pollution Prevention Plan, to prevent discharges of sediment and other pollutants to surface waterways. Additionally, the modified project would implement SFPUC Standard Construction Measure #2 (Air Quality), which requires compliance with the basic construction measures recommended by the BAAQMD to control dust and reduce fugitive dust and criteria air pollutant emissions. Therefore, with implementation of Standard Construction Measures #2, #3, and #6, water quality impacts associated with sedimentation and pollutant discharge to surface waters during construction would remain at less-than-significant levels for the modified project, and the EIR's Mitigation Measures HYD-1a, HAZ-1b, AIR-2a, and AIR-2b for the approved project would not be required for the modified project. Further, approved project Mitigation Measure HYD-1b would not be required for the modified project because no dewatering would occur during construction.

The EIR evaluated whether construction of the approved project could deplete groundwater resources and Alameda Creek flows. The SFPUC does not operate water supply wells at or near the plant, and the approved project did not require use of local groundwater as water supply for dust control and moisture conditioning of backfill. The only effect to groundwater levels would occur from installation of the proposed 78-inch pipeline and treated water reservoir, which the EIR concluded could be addressed with Mitigation Measure HYD-2 (Maintenance of Alameda Creek Flows during Construction Dewatering). Because the modified project would not require local water supplies for construction and would not require dewatering that could affect groundwater levels, this impact would be less than significant, and Mitigation Measure HYD-2 would not be needed for the modified project.

The EIR evaluated the impact of construction activities temporarily altering site drainage patterns. It determined that excavation and temporary stockpiling of spoils for the construction of the proposed treated water reservoir and other treatment facilities and installation of the proposed pipelines could temporarily affect the existing drainage pattern of the approved project site in a manner that could result in substantial erosion or siltation on or off the site. For example, stockpiling of spoils in a drainage channel or swale could result in increased sedimentation, and redirect stormwater drainage in a manner that could increase scour and erosion. Shoring used during excavation as well as staging of materials and equipment could also alter site drainage patterns in a manner that would increase scour and erosion. These effects could have a potentially significant impact on the water quality of Alameda Creek. It concluded that

preparation and implementation of a Stormwater Pollution Prevention Plan would require installation, monitoring, and maintenance best management practices designed to prevent on- and off-site erosion and sedimentation, and prohibit stockpiling of spoils and staging areas in drainages. The SFPUC would also implement its standard erosion control procedures during discharges to minimize potential impacts on receiving waters resulting from erosion. The EIR concluded that compliance with these existing requirements and implementation of Mitigation Measure HYD-1a (Construction Water Quality Best Management Practices) would ensure that potential impacts resulting from the alteration of site drainage patterns would be less than significant.

Excavation and temporary stockpiling of spoils for the construction of the proposed facilities could affect the existing drainage pattern of the modified project site in a manner that could result in substantial erosion or siltation on or off the site. However, the modified project would involve considerably less ground surface alteration and excavation than the approved project. Additionally, as described above, during construction, SFPUC would implement Standard Construction Measure #3 for protection of water quality, which requires the implementation of site-specific erosion and sedimentation controls and preparation of a Stormwater Pollution Prevention Plan to minimize potential impacts on receiving waters resulting from erosion. With implementation of these measures, and in consideration of the modified project's smaller scale, the modified project's impact related to alteration of site drainage patterns would remain at less-than-significant levels. Because Standard Construction Measure #3 includes equivalent requirements to approved project Mitigation Measure HYD-1a, this mitigation measure would not be required for the modified project.

The EIR evaluated the impact of project operations causing degradation of water quality due to discharges of treated water to surface waters. The analysis found that operation of expanded plant facilities under the approved project, including operation of the wash water recovery facilities, could result in the discharge of treated water to local surface waters during a treatment plant process overflow event, resulting in potential impacts to water quality, aquatic organisms, and/or downstream flooding. However, the EIR concluded that the addition of a fourth wash water recovery basin would increase operational flexibility at the plant and reduce the potential for a discharge from these facilities to local surface waters compared with existing conditions. Therefore, this impact was found to be less than significant for the approved project. For the modified project, water discharges would only occur from the ozonation facility in the event of a system of valve malfunction, where water at the ozone contactor structure then rises to overflow from the basins, and where the cause of the overflow is not corrected before the volume of overflow exceeds the capacity of the overflow containment channel. In this case, the water would be drained through the existing discharge pipe, which has an outfall to Alameda Creek, as authorized by the State Water Resources Control Board Statewide National Pollutant Discharge Elimination System Permit for Drinking Water System Discharges to Waters of the United States (Order WQ 2014-0194-DWQ, General Order CAG140001). However, because inadvertent discharges would be authorized by an existing permit, which requires implementation of best management practices, monitoring, and reporting of any such discharges, they would not substantially degrade water quality. No water discharges are anticipated as part of operation of the polymer feed

facility, nor from the proposed repairs and improvements to the existing treatment facilities. Therefore, this impact would remain less than significant for the modified project.

The EIR for the approved project evaluated whether operation of the treated water reservoir could expose people or structures to a significant flooding hazard. It concluded that, due to a combination of reservoir design, capacity of Alameda Creek to absorb the potential flow, and the location of the reservoir in an unpopulated area far from residential or other development, this impact would be less than significant. The modified project does not include a water reservoir or other facilities that could discharge flood flows; therefore, this impact would remain less than significant. The EIR also evaluated whether the placement of spoils in the 100-year floodplain could impede or redirect flood flows. The analysis found that because placement of spoils at the northern spoils site near Interstate 680 would be at the outer fringe of the extrapolated 100-year floodplain, there would be little, if any, measurable effect on flood flows. Placement of spoils at sites east of the plant would be either partially or entirely in the 100-year floodplain of Alameda Creek. However, the EIR concluded that spoils placed at these sites would not substantially impede or redirect flood flows, but could result in a minor increase in the base flood elevation at the SFPUC's access road bridge across Alameda Creek to the plant. Because no sensitive receptors (i.e., residences, schools, childcare centers, churches, hospitals, and nursing homes) were in the vicinity of the proposed encroachments that would be affected by a potential minor increase in 100-year water surface elevations, this impact was found to be less than significant. The modified project would not place permanent spoils on the modified project site. A layer of gravel would be placed on the former three nursery sites for staging, and would remain after construction, however, this site is not in a 100-year floodplain. Therefore, the modified project would not expose people or structures to a significant flooding hazard, and this impact would remain less than significant.

Construction of water treatment facilities at the plant as part of the approved project required reconfiguration of the drainage system for the northern side of the plant, resulting in increased stormwater runoff into Alameda Creek. The EIR determined that increased stormwater runoff due to approximately 4.6 acres of new impervious surfaces associated with the approved project could result in a significant impact from greater volume and velocity of runoff, increased sediment and pollutant load discharged to Alameda Creek, and scour and erosion of the creek banks. The EIR concluded that this impact would be reduced to a less-than-significant level through implementation of Mitigation Measure HYD-7 (Incorporate Alameda County Clean Water Program Design Measures to Accommodate Additional Runoff from New Impervious Services), which would require that design features be incorporated so that post-project runoff does not exceed pre-project runoff, as well as treatment methods to remove pollutants prior to discharge to Alameda Creek (e.g., installing energy dissipation structures, building retention basins, installing an oil and sand separator, using pervious pavement, increasing landscaping or other standard methods for managing stormwater runoff). The ozonation and polymer feed facilities would increase impervious surface area at the plant by approximately 2 acres through development of new structures and hardscape surfaces on currently unpaved ground. However, unlike the approved project, the modified project would not change the overall drainage system at the plant. The modified project design maintains the current system where site drainage not seeped into the

ground is directed to a lined swale that is drained to the sludge lagoons. However, the project would incorporate design elements to comply with the Alameda County Clean Water Program for run off reduction. Additionally, post-construction water balance calculations would be performed during detailed design to size the stormwater management facilities,[49] as is also required to comply with the National Pollutant Discharge Elimination System Construction General Permit. This would ensure that post-project runoff does not exceed pre-project runoff, and that treatment methods are incorporated to remove pollutants prior to discharge. Therefore, the modified project would not result in significant increased stormwater runoff due to new impervious surfaces. Because the modified project's impact would be less than significant, Mitigation Measure HYD-7 would not be required for the modified project.

Finally, the EIR concluded that approved project operation would not deplete groundwater resources because the addition of approximately 4.6 acres of new impervious surfaces would not represent a significant impediment to groundwater recharge due to the overall large size of the surrounding undisturbed watershed lands in comparison. Because the modified project's addition of approximately 2 acres of impermeable surface is also a small percentage of the surrounding watershed lands, it would also not significantly impede groundwater recharge. Therefore, this impact would remain less than significant.

In summary, the modified project would not result in new significant impacts on hydrology and water quality that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; and would not require new mitigation measures.

- **Hazards and Hazardous Materials.** The modified project site is not listed on the Cortese List; is not within 2 miles of a public airport or in an area covered by an airport land use plan; is not in the vicinity of a private airstrip; and is not in an area with an adopted emergency response plan or evacuation plan route. As with the approved project, the modified project would also have no impact with respect to these significance criteria.

  The EIR evaluated potential hazards through transportation, use, and disposal of hazardous materials during construction, and the potential for upset and accident conditions involving the release of hazardous materials in the environment during construction, which could result in incidental releases or spills, potentially posing health risks to workers, the public, and the environment. In addition, portions of the approved project site (which was larger and included additional locations compared to the modified project) had been identified as potentially having contaminated soil and groundwater from historical agricultural and water supply treatment uses (sludge disposal) that could pose risks to workers and the environment if encountered during construction. The EIR concluded that although improper transportation, use, storage, handling, and disposal or accidental release of these materials could result in potentially significant health risks to workers, the public, and the environment, Mitigation Measures HAZ-1a (Soil Investigation Prior to Construction) and HAZ-1b (Preparation of a Construction Risk Management Plan) would

[49] CDMSmith, Sunol Valley Water Treatment Plant Ozonation Project, Conceptual Engineering Report, October 2021.

reduce the impact to less than significant. Mitigation Measure HAZ-1a would require pre-construction soil investigation to results of the soil investigation to ensure spoils reuse and disposal meet the reuse criteria established by the State Water Resources Control Board (SWRCB), determine if specific soils management and disposal procedures for contaminated materials are required, and determine if construction worker health and safety procedures for working with contaminated materials are required. Mitigation Measure HAZ-1b would require preparation and implementation of a Construction Risk Management Plan that addresses hazardous materials and other worker health and safety issues that may arise during construction. However, the modified project would not involve work in the former sludge disposal area used for the approved project. The modified project would involve minimal ground disturbance (less than 500 square feet) at the former tree nursery site for the installation of electrical equipment; as with the former nursery sites used for the approved project, pesticides could be present in shallow surface soils from historical operations at this site. There are no recorded active hazardous waste or substance sites in the modified project site.[50] During construction, the SFPUC would implement its Standard Construction Measure #6 to reduce the risk of release of hazardous materials used during construction (such as storing them pursuant to manufacturer recommendation, maintaining spill kits on site, and containing any spills that occur to the extent safe and feasible, followed by collection and disposal in accordance with applicable laws). Standard Construction Measure #6 also requires that SFPUC undertake an assessment of sites where there is reason to believe that site soil or groundwater that would be disturbed may contain hazardous materials in accordance with any applicable local requirements, or using reasonable commercial standards (e.g., Phase II assessments, as needed). If hazardous materials would be disturbed, the SFPUC would 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 to avoid any adverse exposure to the material during and after construction. 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. With implementation of these measures as required by Standard Construction Measure #6, the modified project's impacts related to hazardous materials transport, use, and disposal or accidental release would remain at less-than-significant levels, and the EIR's mitigation measures applicable to the approved project for hazardous materials would not be required for the modified project.

The EIR evaluated the potential for risk of loss, injury, or death from fire that could be caused by construction equipment and on-site storage of diesel fuel, with the greatest fire danger determined to occur during the clearing phase, when people and machines are working around dry vegetation. Potential sources of ignition include equipment with internal combustion engines, gasoline-powered tools, and equipment or tools that produce a spark, fire, or flame. The EIR concluded that compliance with the Alameda Watershed Management Plan Action fir1, which requires compliance with California Department of Forestry and Fire Protection fire prevention regulations for SFPUC vehicles and equipment, as well as certification by the California

[50] State Water Resources Control Board. Geotracker Database (https://geotracker.waterboards.ca.gov/). Accessed May 1, 2023.

Department of Forestry and Fire Protection of non-SFPUC equipment, would reduce the impact to less than significant. The modified project would involve similar construction activities with a risk of fire. However, because it would also be required to comply with these regulations, this impact would remain less than significant.

The EIR concluded that the impact of exposure to gassy conditions that may be created during tunnel excavation would be reduced to a less-than-significant level through compliance with the California Tunnel Safety Orders and any additional requirements from Cal-OSHA. The modified project would not have an impact related to exposure to gassy conditions because it would not involve tunnel excavation.

Finally, the EIR evaluated the impact of the release of hazardous materials, which could inadvertently occur during facilities operations. The approved project's expansion of plant facilities increased the use of sodium hypochlorite and introduced the use of ammonia and fluoride at the facility. However, the EIR concluded that compliance with federal, state, and local regulations under the required hazardous materials business plan and risk management plan would ensure the risk of release of hazardous materials during facilities operations would be less than significant. The plant's hazardous materials business plan[51] specifies response procedures to be implemented in the event of a chemical emergency, in accordance with applicable regulations. These procedures include notification requirements in the event of a spill, measures to be taken to control and cleanup a spill, procedures for coordination of emergency response personnel, and procedures to be followed should emergency evacuation be required. The modified project would include installation and operation of a facility that would generate and use ozone in the plant's disinfection process. Exposure to ozone can produce headaches, burning eyes, and irritation to the respiratory passages. The current U.S. Occupational Safety and Health Administration exposure limit is 0.1 part per million of air averaged over an eight-hour work shift.[52] However, the proposed ozonation facility includes the following safety systems that would:

- monitor ambient oxygen and ozone concentrations in the ozone generation room;
- continuously display data from these systems locally and through supervisory control and data acquisition;
- sound alarms using horns and beacons in various rooms in the event of a leak detection;
- provide automatic or manual shutdown of the ozone and oxygen systems; and
- control the ventilation systems in the ozone generation room and the ozone contactor galleries in the event of elevated ozone and/or oxygen levels.

The modified project would also include installation of a new emergency backup generator with a 350-gallon diesel fuel tank. The generator and tank would be mounted on a concrete pad with a

[51] SFPUC, Hazardous materials business plan submittal to the California Environmental Reporting System, February 28, 2023.
[52] United States Department of Labor. Occupational Safety and Health Administration. OSHA Occupational Chemical Database – Ozone. August 2022. Source: https://www.osha.gov/chemicaldata/9. Accessed January 27, 2023.

retaining wall around three sides to serve as secondary containment, as required by state regulations. These safety features, in combination with required safety training and procedures, and compliance with federal, state, and local regulations under the required hazardous materials business plan and risk management plan (which would be updated as required by the California Health and Safety code to account for proposed changes in the storage of hazardous materials), would ensure that the risk of release of hazardous materials that could affect plant staff and the environment during facilities operations would be less than significant for the modified project.

In summary, the modified project would not result in new significant impacts related to hazards and hazardous materials that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; would not result in more severe impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR; and would not require new mitigation measures.

- **Mineral and Energy Resources.** The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR evaluated the impact of use of fuel or energy in a wasteful manner during construction of the approved project. It concluded that this impact would be less than significant because implementation of greenhouse gas reduction and exhaust control measures would reduce inefficient use of construction equipment. Because the modified project would implement similar measures, including as required by Standard Construction Measure #2 (Air Quality), this impact would remain less than significant.

  The EIR evaluated the loss of availability of known mineral resources due to placement of spoils material and siting of new facilities. The plant is in an area not classified by California Mineral Land Classification System for mineral resources, so facilities sited at the plant were found to not have a significant impact relative to mineral resources. Although spoils disposal for the approved project was planned for a quarry pit in an area classified by the California Mineral Land Classification System as MRZ-2 (where significant mineral deposits may be present), the impact was determined to be less than significant because the aggregate mining was to be completed by the time of project construction. There are no mining activities occurring at the modified project site. The ozonation and polymer feed facilities would be constructed at the plant, and therefore would not affect availability of known mineral resources. The staging area at the nursery site is an the area designed as MRZ-2. However, because staging is a temporary activity, access to any mineral resources there would not be impeded. This impact would remain less than significant for the modified project.

  The EIR evaluated the impact of construction-related use of large amounts of fuel or energy, or the use of these resources in a wasteful manner. The approved project was found to increase energy consumption at the plant by 750,000 kilowatt-hours, a 36 percent increase in plant operations. It concluded that this would be a small amount relative to total regional water system facilities, and energy savings would be achieved by reducing the volume of raw water pumped (through water conservation), using energy-efficient treatment and pumping equipment, using effective instrumentation and controls, managing pumping operations, and implementing consistent repairs and maintenance of facilities to minimize power use. Therefore, the impact of using energy in a wasteful manner was found to be less than significant. The modified project facilities would be designed in compliance with all applicable California Building Energy Efficiency Standards

(Title 24), reducing energy consumption during operations. The ozonation facility would also be designed in accordance with the green building requirements of the San Francisco Green Building Code for Factory Industrial, Group F, buildings less than 10,000 square feet.[53] The new facilities constructed under the modified project would not be operated in a wasteful manner. SFPUC would operate the ozonation facility a total of approximately 180 days per year, and most of the operation time would be at a low rate. The polymer feed facility would operate intermittently, for an estimated total of 60 to 90 days per year. In addition, solar panels installed on the roof of the ozonation building would offset a portion of the electricity consumption. Lastly, the repairs and upgrades to existing water treatment facilities would allow these facilities to run more efficiently. Therefore, this impact would remain less than significant for the modified project.

In summary, the modified project would not result in new significant mineral and energy resources impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe mineral and energy resources impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new mineral and energy resources mitigation measures.

- **Agriculture and Forest Resources.** The locations of the approved and modified projects do not contain forest land or land subject to Williamson Act contracts, and do not involve other changes in the existing environment; which, due to their location or nature, could result in the conversion of farmland to non-agricultural use or forest land to non-forest use. Therefore, these significance criteria are not applicable to the approved project nor to the modified project.

  The Sunol Valley Water Treatment Plant Expansion and Treated Reservoir Project EIR found that operation of the approved project would result in a significant impact requiring Mitigation Measure AG-1 (Compensation for loss of Unique Farmland) because of the permanent conversion of approximately 21 acres of Unique Farmland for the placement of spoils. The former tree nursery site construction staging area for the modified project is classified by the California Department of Conservation as Unique Farmland. The California Department of Conservation defines Unique Farmland as lesser quality soils used for the production of the state's leading agricultural crops, which is usually irrigated land, but may include non-irrigated orchards or vineyards, and the land must have been cropped (in agricultural use) at some time during the four years prior to the mapping.[54] The most recent mapping for Alameda County is 2018.[55] Based on a review of Google Earth imagery, nursery operations at this site gradually decreased beginning in 2014, and were discontinued by April 2018. Although the state's 2018 mapping classifies the site as Unique Farmland, the site no longer meets the definition of Unique Farmland because it has not been cropped in the last five years. Gravel placed for construction staging use at the former tree nursery site would remain after construction to maintain this area for staging use by SFPUC as may be needed in the future; however, the placed gravel would not preclude future agricultural use,

[53] SFPUC, San Francisco Planning Department Compliance Checklist Table for Greenhouse Gas Analysis prepared for the modified project, May 17, 2023.
[54] California Department of Conservation, Division of Land Resource Protection, Important Farmland 2018 for Alameda County. Available online at https://maps.conservation.ca.gov/DLRP/CIFF/, accessed June 13, 2023.
[55] Ibid.

because the previous tree nursery had gravel-lined access roads and container plant beds. Regardless, because the former tree nursery site no longer meets the definition of Unique Farmland, continued use of the site for staging would not result in the permanent conversion of Unique Farmland. The ozonation and polymer feed facilities and existing facilities upgrades would be at the plant, which is mapped as Urban and Built-Up Land. Therefore, this impact would be less than significant, and the EIR's mitigation measure applicable to the approved project would not be required for the modified project.

In summary, the modified project would not result in new significant agriculture and forest resources impacts that were not previously identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; would not result in more severe agriculture and forest resources impacts than those identified in the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR; and would not require new agriculture and forest resources mitigation measures.

- **Wildfire.** The Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project EIR did not analyze wildfire impacts, because this topic was not mandated for inclusion under CEQA until 2019. However, it did analyze whether the approved project would result in impacts related to the significant risk of fires, and found that such impacts would be less than significant. The modified project would also result in less-than-significant impacts relative to the significant risk of fires because it would occur in areas that have adequate fire-fighting capabilities, and would not involve new facilities or changes to the landscape that would exacerbate fire risk (see additional discussion above under Hazards and Hazardous Materials). Therefore, the modified project would not result in new significant impacts related to wildfires, and would not require new mitigation measures.

Conclusion

Based on the foregoing, it is concluded that the analyses conducted and the conclusions reached in the EIR certified by the planning commission on December 3, 2009 remain valid, and that no supplemental environmental review is required. The proposed revisions to the project would not cause new significant impacts not identified in the EIR, and no new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the modified project that would cause significant environmental impacts to which the modified project would contribute considerably, and no new information has become available that shows that the modified project would cause significant environmental impacts. Therefore, no supplemental environmental review is required beyond this addendum.

I do hereby certify that the above determination has been made pursuant to State and Local requirements.

Lisa Gibson
Environmental Review Officer

July 13, 2023

Date of Determination

Appendix A

SFPUC Standard Construction Measures

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

OFFICE OF THE GENERAL MANAGER
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102-3220
T 415.554.0740
F 415.554.3161
TTY 415.554.3488

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

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)

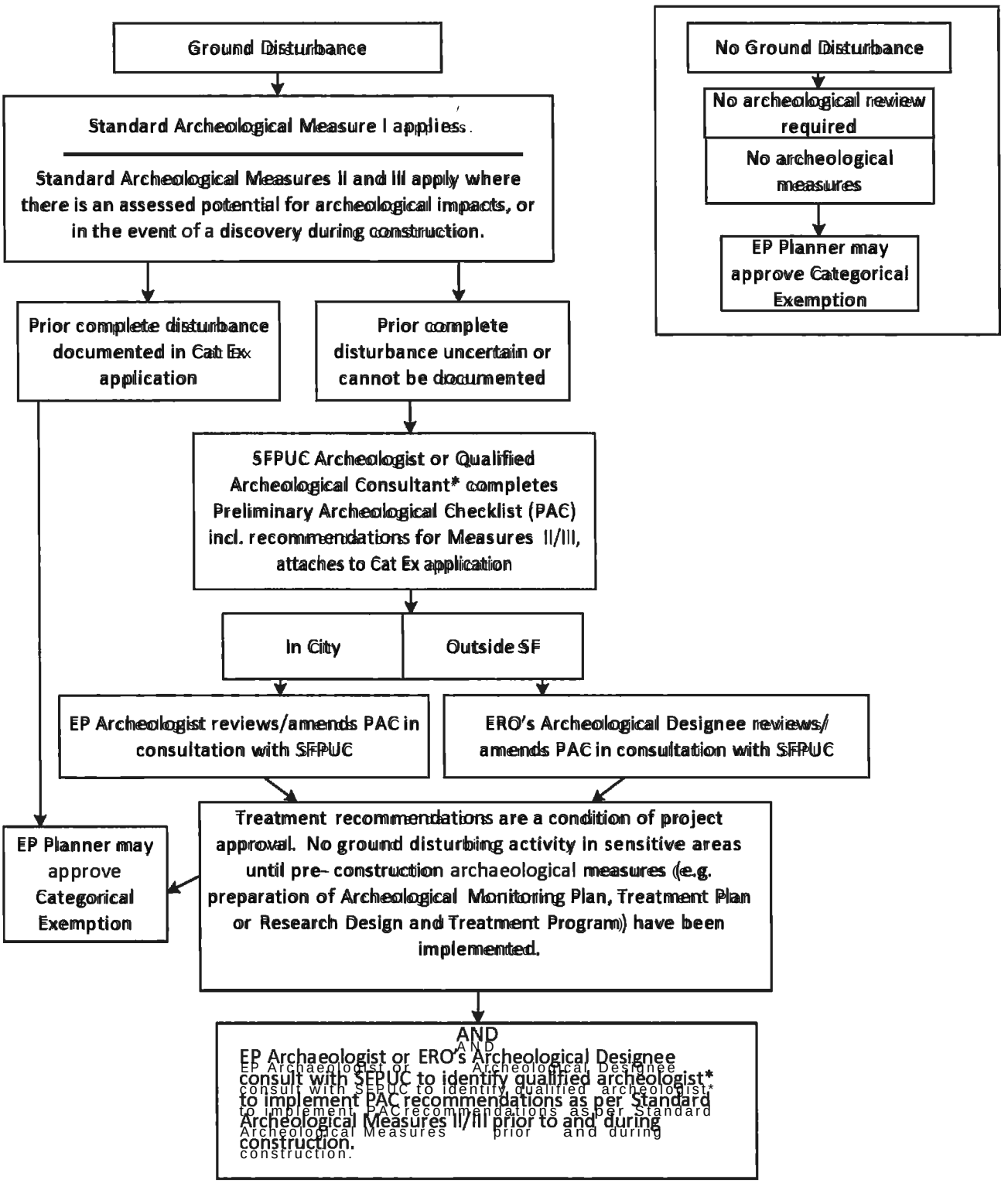
SFPUC Archeological Measure II (Archeological Monitoring)

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.

SAN FRANCISCO PLANNING DEPARTMENT

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 I.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.

SAN FRANCISCO
PLANNING DEPARTMENT

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

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

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

Mitigation Monitoring and Reporting Program

Mitigation Measure	Responsible Party	Reviewing and Approving Party	Monitoring and Reporting Actions	Implementation Schedule
Cultural Resources				
Mitigation Measure CR-1a. Conduct Preconstruction Surveys for Significant Paleontological Resources in Areas of Undetermined and High Paleontological Sensitivity Before construction begins, the SFPUC shall retain a California Registered Professional Geologist with appropriate expertise or a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) to conduct a more detailed evaluation of potential paleontological resources in those areas of the project identified as undetermined or highly sensitive for paleontological resources, namely areas of Holocene, Pleistocene, which occur where the ozonation and polymer feed facilities would be constructed. The following shall be adhered to: • The evaluation shall include a thorough literature-based and field-reconnaissance survey of the highly sensitive and undetermined areas where surficial excavation activities are planned. The field survey shall be limited to identifying potentially significant features at the surface. • The evaluation shall be documented in a report to be submitted for review and approval by the SFPUC prior to the start of construction. • If the evaluation and survey result in the discovery of a paleontological resource exposed at the surface or confirm the potential for impacts on significant paleontological resources, Mitigation Measures CR-1c and CR-1d shall also be implemented. Mitigation Measure CR-1a shall be implemented as a safeguard regardless of the identified likelihood of potential impacts.	1. SFPUC EM	1. SFPUC EM and ERO	1. Obtain and review resume or other documentation of consulting paleontologist's qualifications. Conduct literature review and field-reconnaissance survey of locations for the ozonation and polymer feed facilities. Document evaluation in a report.	1. Preconstruction
	2. SFPUC CM Team and EM	2. SFPUC EM	2. If necessary based on the findings of the evaluation, implement Mitigation Measures CR-1c and CR-1d.	2. Construction
Mitigation Measure CR-1b. Paleontological Resources Worker Awareness Training Before construction begins, the SFPUC shall ensure that all construction personnel receive paleontological resources awareness training that includes information on the possibility of encountering fossils during construction; the types of fossils likely to be seen, based on finds in the site vicinity; and proper procedures in the event fossils are encountered. Worker training shall be prepared by a qualified paleontologist as defined by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee, 1995) or other appropriate personnel (e.g., California Registered Professional Geologist with appropriate expertise) experienced in teaching non-specialists.	1. SFPUC EMB	1. SFPUC EM	1. Ensure that the contract documents include the requirement that all construction personnel attend paleontological resources worker awareness training.	1. Design
	2. SFPUC EM	2. SFPUC EM	2. Prepare a project-specific paleontological-resources awareness program. Include documentation of qualifications of the consulting paleontologist developing the training program (e.g., resume). Refer to mitigation measure for specific training requirements.	2. Preconstruction and Construction
	3. SFPUC EM	3. SFPUC EM	3. Ensure that all personnel attend training prior to beginning work and sign training sign-in sheet. Maintain file of sign-in sheets. Report noncompliance and ensure corrective action.	3. Construction
Mitigation Measure CR-1c. Perform Preconstruction Surface Salvage of Any Significant Paleontological Resources Discovered If a significant paleontological resource is discovered at the ground's surface as a result of pre-construction surveys conducted per Mitigation Measure CR-1a and cannot be avoided through exclusion of the area from project disturbance (e.g., through the installation of exclusion fencing), the SFPUC shall retain a California-Registered Professional Geologist with appropriate expertise or a qualified professional paleontologist as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) to salvage and treat the resource prior to construction in the immediate vicinity of the find. Salvage of the resource would include recovering the item and properly documenting, preparing, and curating the find. Treatment of the resource may include preparation and recovery of fossil materials for housing in an appropriate museum or university collection and may also include preparation of a report for publication describing the find. No construction activities at the location of the find shall be allowed until the salvage operation is completed and authorization is provided by the SFPUC.	1. SFPUC EM	1. SFPUC EM and ERO	1. Mobilize a qualified paleontologist to the area to evaluate the find and advise ERO as to the significance of the discovery. Proceed with treatment approach agreed to by ERO.	1. Design
	2. SFPUC EM	2. SFPUC EM and ERO	2. Ensure that treatment approved by the ERO is implemented and that the resultant report or find information is placed in a location readily available to the scientific community.	2. Construction
Mitigation Measure CR-1d. Conduct Paleontological Resources Monitoring during Construction in Areas of Undetermined and High Paleontological Sensitivity, as Required If determined necessary after implementation of Mitigation Measure CR-1a, the SFPUC shall retain a qualified paleontologist as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995) to conduct on-site monitoring for unanticipated discovery of potentially significant paleontological resources during initial ground-disturbing activities (e.g., grading and excavation) in the areas with geological units identified as highly sensitive for paleontological resources and as field-verified by the qualified paleontologist. After initial ground disturbance activities in the paleontologically sensitive areas, monitoring shall cease but a paleontologist shall be retained on-call by the SFPUC throughout the project in the event of an unanticipated find during subsequent construction activities. The monitor will have authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely, and/or recover fossils.	1. SFPUC EM	1. SFPUC EM	1. Obtain and review resume or other documentation of consulting paleontologist's qualifications. Conduct monitoring (if necessary). Document activities in monitoring logs.	1. Construction

Mitigation Measure	Responsible Party	Reviewing and Approving Party	Monitoring and Reporting Actions	Implementation Schedule
Mitigation Measure CR-1e. Stop Work if Known or Suspected Paleontological Resources Are Encountered If fossil materials are discovered during any project-related activity, all ground-disturbing work within 50 feet of the find shall stop immediately until the paleontological monitor can assess the nature and importance of the find and recommend appropriate treatment. Recommendations for treatment shall be consistent with SVP guidelines (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee, 1995) and may include preparation and recovery of fossil materials so they can be housed in an appropriate museum or university collection.	1. SFPUC EMB	1. SFPUC EM	1. Ensure that the contract documents include measures applicable to accidental discovery of paleontological resources.	1. Design
	2. SFPUC EM	2. SFPUC EM and ERO	2. Monitor to ensure that the contractor implements measures in contract documents, report noncompliance, and ensure corrective action. Ensure that potential discoveries are reported as outlined in the mitigation measure and that the contractor leaves the find in place and suspends work in the vicinity. In the event of a potential historical resource discovery, mobilize a qualified paleontologist to the area to evaluate the find and advise ERO as to the significance of the discovery. Proceed with treatment approach agreed to by ERO.	2. Construction
	3. SFPUC EM	3. SFPUC EM and ERO	3. Ensure that treatment approved by the ERO is implemented and that the resultant report or find information is placed in a location readily available to the scientific community.	3. Construction
Biological Resources				
Mitigation Measure BIO-1a: Conduct Mandatory Biological Resources Awareness Training for All Project Personnel The SFPUC shall ensure that mandatory biological resources awareness training is provided to all construction personnel as follows: • The training shall be developed and provided by a qualified biologist familiar with the special-status species that may occur in the project area. The training program shall be approved by an SFPUC staff biologist prior to implementation if prepared by a consulting biologist. • The training shall be provided before any work occurs in the project area, including equipment mobilization, vegetation clearing or site grading. • The training shall provide educational information on the natural history of the special-status species potentially occurring in the project area, a discussion of required mitigation measures to avoid impacts on the special-status species, and discuss penalties for not complying with biological mitigation requirements. • The training shall also include education regarding the importance of preventing the spread of invasive non-native species. • If new construction personnel are added to the project, the contractor shall ensure that new personnel receive training before they start working. The subsequent training of personnel can include a videotape of the initial training and/or the use of written materials rather than in-person training by a biologist.	1. SFPUC EMB	1. SFPUC EM	1. Ensure that the contract documents include the requirement that all construction personnel attend biological resources awareness training.	1. Design
	2. SFPUC EM	2. SFPUC EM	2. Prepare a project-specific biological-resources awareness program. Include documentation of qualifications of the consulting biologist developing the training program (e.g., resume). Refer to mitigation measure for specific training requirements.	2. Preconstruction
	3. SFPUC EM	3. SFPUC EM	3. Ensure that all personnel attend training prior to beginning work and sign training sign-in sheet. Maintain file of sign-in sheets. Report noncompliance and ensure corrective action.	3. Preconstruction and Construction
Mitigation Measure BIO-1b: Install Wildlife Exclusion Fencing along the Perimeter of the Construction Work Area and Implement General Measures to Avoid Impacts to Special-Status Species and Sensitive Natural Communities To prevent special-status species from moving through the project area, the SFPUC or its contractors shall install temporary exclusion fencing around the project boundaries (including access roads, staging areas, etc.) within 1 week prior to the start of construction activities. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed and that construction equipment is confined to the designated work areas, including any off-site mitigation areas and access thereto. The fence shall be made of suitable material that does not allow any of the animals listed above to pass through or over, and the bottom shall be buried to a depth of at least 6 inches such that these species cannot crawl under the fence. In addition, the fence shall include one-way funnels to allow special-status wildlife species to escape if they become trapped within the site. The exclusion fencing shall not cross Alameda Creek, but	1. SFPUC EMB	1. SFPUC EM	1. Ensure that contract documents include requirements for contractor to install temporary wildlife exclusion fencing and signage; install temporary construction fencing; follow pruning guidelines; provide advance notification to SFPUC of construction activities to allow a qualified biologist and arborist to perform siting and inspection of fencing installation; and follow general measures to prevent and minimize impacts to special-status species and sensitive natural communities.	1. Design

Mitigation Measure	Responsible Party	Reviewing and Approving Party	Monitoring and Reporting Actions	Implementation Schedule
shall be installed around the perimeter of the construction work areas on the west side of Alameda Creek to confine California red-legged frogs to the creek channel and discourage them from moving into the work area from the creek. A qualified biological monitor shall be on-site during installation of the fencing to survey for and relocate any animals to the outside the work area boundaries. Federally listed species shall only be relocated if authorized by the USFWS. State-listed species shall only be relocated if authorized by CDFW. The exclusion fencing shall be removed only after construction of the project is entirely completed. Exclusionary construction fencing and explanatory signage shall be placed around the perimeter of sensitive vegetation communities that could be impacted by construction activities throughout the period during which such impacts could occur. Signage shall explain the nature of the sensitive resource and that no impact to the community is allowed. The fencing shall include a buffer zone of at least 20 feet between the resource and construction activities. All exclusionary fencing shall be maintained in good condition throughout the construction period. The SFPUC shall avoid and minimize impacts on native mature trees (defined as trees that are 6 inches diameter at breast height [dbh], or 10 inches dbh aggregate for multi-trunk trees) by implementing the following measures: • A qualified arborist (defined as an International Society of Arboriculture certified arborist or a consulting arborist who is a member of the American Society of Consulting Arborists) or a qualified biologist shall identify the location of fencing to be installed around trees to be retained. • Prior to the start of construction, the SFPUC or its contractors shall install a 4-foot-tall fence at the limits of construction, outside the dripline of all trees that are to be retained that are within 50 feet of any grading, road improvements, underground utilities, or other development activity (identified in the field via flagging by the qualified arborist or biologist). Also prior to construction, the SFPUC shall verify that the temporary construction fencing is installed and approved by a qualified arborist or biologist. Any encroachment within these areas must first be approved by a qualified arborist or biologist and the SFPUC. • For native trees on slopes, a silt fence shall be installed at the upslope base of the protective fencing to prevent soil from drifting down over the root zone (defined as the extent of the tree dripline) if work shall be performed upslope of any such trees. • The contractor shall be required to perform any necessary pruning using the “Pruning Guidelines” adopted by the California Department of Forestry and Fire Protection and consistent with the Alameda County Tree Ordinance. In addition, the SFPUC shall ensure that the following general measures are implemented by the contractor to prevent and minimize impacts to special-status species and sensitive natural communities: • No pets shall be allowed in the project area. • No firearms shall be allowed in the project area. • If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas. • All workers and construction activities shall occur away from sensitive natural communities. • If trenches greater than 2 feet are left open overnight, the trench shall either be covered at the end of the work day (e.g., with plywood or other hard material) or one or more escape ramps (constructed of earth fill or wooden planks) shall be provided. Before such holes are filled, they shall be thoroughly inspected for trapped animals. • Project personnel shall be required to immediately report any harm, injury, or mortality of a special-status species during construction, including entrapment, to the construction foreman or biological monitor. The construction foreman or monitor shall immediately notify the SFPUC. The SFPUC shall provide verbal notification to the USFWS, Endangered Species Office in Sacramento, California, and/or to the local CDFW warden or biologist (as applicable) within 1 working day of the incident. The SFPUC shall follow up with written notification to USFWS and/or CDFW (as applicable) within 5 working days of the incident. All observations of special-status species shall be recorded on CNDDB field sheets and sent to CDFW by the SFPUC or representative biological monitor. • The spread of invasive non-native plant species and plant pathogens shall be avoided or minimized by implementing the following measures: - Construction equipment shall arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species. - Any imported fill material, soil amendments, gravel etc., required for construction and/or restoration activities that would be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material. - Certified, weed-free, imported erosion-control materials (or rice straw in upland areas) shall be used exclusively, if possible. - To reduce the movement of invasive weeds into uninfested areas, the contractor shall stockpile topsoil removed during excavation of trenches or test pits, which shall be subsequently replaced during re-establishment of disturbed project areas. - Trees within the project site areas shall be assessed for symptoms of sudden oak death and the potential presence of *Phytophthora ramorum*. If diseased trees are identified within the work area, site controls shall be utilized to minimize the spread of infected plant and soil material to other project locations by segregating any removal material from other plant and soil material and by providing for vehicle/equipment wash down before moving equipment to other work locations. The Alameda County registered professional forester shall be consulted prior to disposal of any diseased trees. Soil removed from the immediate vicinity of an infected tree shall not be used for site restoration and may require disposal at a landfill. • Implementation of these measures during construction and site restoration shall be verified by a biological or environmental monitor.	2. SFPUC EM 3. SFPUC EM	2. SFPUC EM 3. SFPUC EM	2. Obtain and review resume or other documentation of consulting biologist’s and arborist’s qualifications. Monitor installation of wildlife exclusion fencing and signage. Identify placement of construction fencing around trees to be retained and verify proper installation of fencing. 3. Monitor to ensure that the contractor implements measures in contract documents and maintains exclusion and construction fencing in good condition throughout construction. Report noncompliance and ensure that corrective actions are implemented. Document activities in monitoring logs. Record special-status species observations and send to CDFW as required by the measure.	2. Preconstruction 3. Construction

Mitigation Measure	Responsible Party	Reviewing and Approving Party	Monitoring and Reporting Actions	Implementation Schedule
Mitigation Measure BIO-1c: Conduct Pre-Construction Surveys and Monitor Construction Activities for California Tiger Salamander, California Red-Legged Frog, Western Pond Turtle, and Alameda Whipsnake *Preconstruction Surveys* Prior to initial ground-disturbing activities in the project area, a qualified biologist shall survey the construction areas as well as undeveloped areas in the immediate vicinity for the presence of California tiger salamanders, California red-legged frogs, and Alameda whipsnakes, as follows: • *California tiger salamander.* Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, the qualified biologist shall survey upland habitat in the project area suitable for California tiger salamanders and suitable refuge/burrow sites. As feasible, refuge/burrow areas identified within the project boundary shall be temporarily fenced and avoided. If relocation of individuals is required, SFPUC shall consult with USFWS and CDFW. • *California red-legged frog.* Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work the qualified biologist shall survey suitable upland habitat in the project area for California red-legged frog. The biologist shall survey upland habitat for potential burrows/aestivation sites. The same methodology for the preconstruction surveys of upland habitat for burrows and fencing burrows shall be implemented as described above for California tiger salamander. If relocation of individuals is required, SFPUC shall consult with USFWS. • *Western Pond Turtle.* Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, a qualified biologist shall survey suitable upland habitat in the project area for western pond turtle. The biologist shall survey upland habitat for the presence of nests containing pond turtle hatchlings and eggs. All nests containing hatchlings or eggs identified within the project boundary shall be temporarily fenced and avoided. • *Alameda whipsnake.* Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, a qualified biologist shall conduct a reconnaissance survey of upland habitat in the project area suitable for Alameda whipsnake. If relocation of individuals is required, SFPUC shall consult with USFWS and CDFW. Relocation of federally listed species shall only be conducted as authorized by the USFWS, for state-listed species as authorized by CDFW, or by both agencies for species that are protected at both the federal and state level. *Construction Monitoring* At the beginning of each workday during initial ground disturbance (including grading, excavation, and vegetation-removal activities) and during the rainy season, a qualified biologist shall conduct onsite monitoring for the presence of California tiger salamanders, California red-legged frogs, and Alameda whipsnakes in the area where ground disturbance would occur, as follows: • Inspect the wildlife exclusion fence to ensure that it does not have any tears or holes, that the base of the fence is still buried, and that no individuals have been trapped on or outside of the fence. • Closely monitor any California tiger salamanders, California red-legged frogs, and Alameda whipsnakes if found along, on, or outside the fence until they move away from the construction area. • Check all open trenches or holes and under parked vehicles for the presence of California tiger salamanders, California red-legged frogs, and Alameda whipsnakes. If any of these species is found by the biological monitor or construction personnel within the work area, construction activities shall cease in the immediate vicinity of the individual until the USFWS and/or CDFW is contacted and the animal has been removed from the construction area by a qualified biologist and is released near a suitable burrow or other suitable habitat no more than 300 feet from the construction area, or until the animal moves on its own away from the construction area. The biological monitor shall not stay onsite for the entire day but shall remain on-call in case any of these animals are discovered and need to be moved. The SFPUC shall designate the SFPUC Resident Engineer as the point of contact in the event that a California tiger salamander, California red-legged frogs, or Alameda whipsnakes is discovered onsite when the biological monitor is not present. The rainy season shall be determined by rainfall each year. Rainy season monitoring shall begin immediately after the first rainfall in the fall and continue until 3 weeks after the last rain in the spring. If it rains again after this time, then daily monitoring shall recommence until 3 weeks past these rains. During the non-rainy season, and once all initial ground-disturbing activities are completed, the biological monitor shall perform spot checks of the project area at least once a week for the duration of construction to ensure that the perimeter fence is in good order, trenches are being covered if left open overnight (or escape ramps are being provided), project personnel are conducting checks beneath parked vehicles prior to their movement, that no individual animals are located outside or inside the construction fencing, and that all other required biological protection measures are being complied with.	1. SFPUC EMB 2. SFPUC EM 3. SFPUC EM	1. SFPUC EM 2. SFPUC EM 3. SFPUC EM	1. Ensure that contract documents include requirement for contractor to provide advance notification to SFPUC of construction activities to allow a qualified biologist to perform preconstruction surveys. 2. Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct preconstruction surveys. Install temporary fencing around refuge/burrow/nest sites (if necessary). 3. Conduct monitoring and inspections as specified by measure. Document activities in monitoring logs. Report noncompliance and ensure that corrective actions are implemented.	1. Design 2. Preconstruction 3. Construction

Mitigation Measure	Responsible Party	Reviewing and Approving Party	Monitoring and Reporting Actions	Implementation Schedule
Mitigation Measure BIO-1d: Invasive Weed Control and Vegetation Restoration *Invasive Weed Control Measures* Invasive weeds such as yellow star-thistle, purple star-thistle, Italian thistle, bull thistle, barb goat grass, and medusa head grass readily colonize soils that have been disturbed by grading or other mechanical disturbance. To avoid or minimize the introduction or spread of invasive weeds into uninfested areas, the SFPUC shall incorporate the following measures into the construction plans and specifications for work: • Construction equipment shall arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species. • Any imported fill material, soil amendments, gravel etc., required for construction and/or restoration activities that would be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material. • Certified, weed-free, imported erosion-control materials (or rice straw in upland areas) shall be used exclusively. • The environmental awareness training program for construction personnel shall include an orientation regarding the importance of preventing the spread of invasive weeds. • To reduce the movement of invasive weeds into uninfested areas, the contractor shall stockpile topsoil removed during excavation of trenches or test pits, which shall be subsequently replaced during re-establishment of disturbed project areas. • Implementation of these measures during construction and site restoration shall be verified by a biological or environmental monitor. *Minimum Restoration Measures* Restoration areas are those areas that are disturbed on-site but would be restored to their baseline conditions as defined by the success criteria described below. In order to restore these areas, the SFPUC shall implement the following: • Stockpile the topsoil separately from subsoil, replace soil layers in the same order they were removed, and restore the natural grade and contours of the area. • For grassland vegetation areas, reseed the affected areas with a noninvasive native grass and forb seed mix. • For native trees (defined as trees that are 6 inches diameter at breast height or 10 inches for multi-tree trunks), replant affected areas with the same species with either three replacement trees of 15-gallon size for any native mature tree within the County right-of-way of Calaveras Road; or on an inch-by-inch basis for any native mature tree outside the County right-of-way or as otherwise agreed to with the USFWS and CDFW. *Minimum Success Criteria* The success criteria for restoring temporarily disturbed areas shall be as follows: • All areas of grassland not permanently disturbed shall be restored to their baseline condition. Percent cover and vegetation composition (other than non-native annual grassland) shall meet or exceed baseline cover and composition condition. • Temporarily impacted and restored grassland areas shall be monitored at least once a year for at least 3 years or greater, as determined in consultation with applicable permitting agencies and/or as needed to verify whether the vegetation is fully established and self-sustaining. • If full maturity of slow-growing vegetation will take longer than 3 years (for grassland vegetation), such species shall be fully established and self-sustaining in order to meet the criteria and the monitoring period shall be extended accordingly to verify whether the vegetation is fully established and self-sustaining. • Grassland restoration areas shall be monitored for invasive plants annually in the first 3-years following replanting. If invasive plants are found during the 3-year monitoring period, they shall be removed as necessary to support meeting the cover and vegetation composition success criteria. The relative cover of invasive plant species shall not exceed 5 percent in any year. Invasive plant species shall be defined as any highly invasive non-native species (Tier 1), or moderately invasive non-native species (Tier 2) listed in the Water Board's Fact Sheet for Wetland Projects. • The earliest success criteria can first be met for grassland vegetation is 3 years after restoration. Maintenance and monitoring shall continue until the success criteria are met. • Alternatively, if success criteria cannot be met within 3 years for grassland vegetation, the SFPUC may explore alternative mitigation options, such as off-site compensation or mitigation credits, with the applicable resource agencies.	1. SFPUC EMB	1. SFPUC EM	1. Ensure that contract documents include invasive weed control measures and restoration measures.	1. Design
	2. SFPUC EM	2. SFPUC EM	2. Monitor to ensure that the contractor implements measures in contract documents. Document activities in monitoring logs. Report noncompliance and ensure that corrective actions are implemented.	2. Construction
	3. SFPUC EM	3. SFPUC EM	3. Conduct monitoring and maintenance of restored areas as specified by measure. Document achievement of success criteria.	2. Post Construction
Mitigation Measure BIO-6: Remove Trees and Shrubs during the Non-breeding Season (August 16–February 14) for Birds or Conduct Nesting Bird Surveys, and Establish No-Disturbance Buffers, as Appropriate The SFPUC shall conduct construction and tree and shrub removal during the non-breeding season (generally August 16 through February 14) where feasible to avoid impacts to migratory birds including raptors. If construction activities must occur during the breeding season (February 15–August 15), the SFPUC shall: • Retain a qualified wildlife biologist who is experienced in identifying bird nests and breeding behaviors to conduct nesting-bird surveys in and within 500 feet of the project site. These surveys shall be conducted within 1 week prior to initiation of construction activities	1. SFPUC EMB	1. SFPUC EM	1. Ensure that contract documents include requirement to conduct tree and shrub removal during the non-breeding season, where feasible, and to provide advance notification to SFPUC of construction activities to allow a qualified biologist to perform preconstruction surveys.	1. Design
	2. SFPUC EM	2. SFPUC EM	2. Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct survey and establish buffers (if necessary).	2. Preconstruction

Mitigation Measure	Responsible Party	Reviewing and Approving Party	Monitoring and Reporting Actions	Implementation Schedule
(including preconstruction activities such as fence installation) at any time between February 15 and August 15. If no active nests or roosts are detected during surveys, then no additional mitigation is required. • If migratory bird or raptor nests are found in the construction area or in the adjacent surveyed area or are known to occur within an applicable regulatory buffer from the construction area (such as the golden eagle nest that has been documented approximately 0.17 mile east of the former tree nursey site), a no-disturbance buffer shall be established around the nesting location to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late-June through mid-July). The extent of these buffers shall be determined by a wildlife biologist in consultation with the applicable resource agencies (i.e., USFWS or CDFW) and shall depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance activity, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors shall be analyzed and used by a qualified wildlife biologist to assist the USFWS and/or CDFW in making an appropriate decision on buffer distances. Trees and shrubs that contain nests may be removed after a qualified wildlife biologist determines that the young have fledged.	3. SFPUC EM	3. SFPUC EM	3. Monitor active nests (if necessary) and document activities in monitoring logs.	3. Construction
Mitigation Measure BIO-7: Conduct Preconstruction Surveys for Sensitive Bats and Implement Avoidance and Minimization Measures if Found Within 1 week prior to tree removal, a qualified biologist shall survey any trees that shall be removed during project construction for roosting bats. Bats may be present any time of the year. The biologist shall thoroughly search trees that provide appropriate roosting habitat for bats (trees with foliage, cavities, or that are hollow) for bats or evidence of bats. If no roosting bats or evidence of bats are found, removal of trees may proceed. If bats are found or evidence of use by bats is present, trees shall be mapped and marked with flagging. The SFPUC shall ensure that the trees are not removed until CDFW has been consulted for guidance on measures to avoid and minimize disturbance of the bats. Measures may include deferring tree removal, monitoring trees and excluding bats from a tree until it is removed, and implementation of a temporary construction buffer to avoid disturbance of young before they are able to fly (for pallid bats, this period is between April and August.	1. SFPUC EMB	1. SFPUC EM	1. Ensure that contract documents include requirement for contractor to provide advance notification to SFPUC of construction activities to allow a qualified biologist to perform survey prior to tree removal.	1. Design
	2. SFPUC EM	2. SFPUC EM	2. Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct survey. If bats are found or evidence of use by bats is present, mark with flagging and consult with CDFW.	2. Preconstruction/ Construction
Mitigation Measure BIO-10: Conduct Pre-Construction Surveys for Dusky-footed Woodrat and Implement Avoidance and Minimization Measures if Found Not more than 2 weeks prior to disturbance or vegetation removal in suitable habitat for dusky-footed woodrat (riparian willow forest/scrub) a qualified biologist shall conduct a preconstruction survey for stick nests of woodrats. The survey shall be conducted in the riparian willow forest/scrub habitat along Alameda Creek. Locations of nests within the survey area shall be flagged and mapped. Woodrat nests within the construction areas shall be fenced and avoided. If it is determined that avoidance is not possible, the SFPUC shall consult with CDFW to determine if trapping woodrats (using live traps) and disassembling nests is warranted.	1. SFPUC EMB	1. SFPUC EM	1. Ensure that contract documents include requirement for contractor to provide advance notification to SFPUC of construction activities to allow a qualified biologist to perform preconstruction surveys.	1. Design
	2. SFPUC EM	2. SFPUC EM	2. Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct preconstruction surveys. Install temporary fencing around nest sites (if necessary).	2. Preconstruction
Cumulative				
Implement Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-6, BIO-7, and BIO-10.				

Notes:

EM = Environmental Management
CDFW = California Department of Fish and Wildlife
CEQA = California Environmental Quality Act
CNDDB – California Natural Diversity Database
EMB = Engineering Management Bureau
ERO = Environmental Review Officer
SFPUC = San Francisco Public Utilities Commission
USFWS = United States Fish and Wildlife Service