



Pacheco Reservoir Expansion Project Initial Study and Notice of Preparation



NOTICE OF PREPARATION

From: Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Subject: Notice of Preparation of a Draft Environmental Impact Report

Project Title: Pacheco Reservoir Expansion Project

Project Location: Pacheco Reservoir and Creek

The Santa Clara Valley Water District will be the Lead Agency and will prepare an environmental impact report for the above project. The District needs to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but **not later than 30 days after receipt of this notice.**

Please send your response to: Melih Ozbilgin
Santa Clara Valley Water District
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San Jose, CA 95118
(408) 630-2725
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We will need the name for a contact person in your agency.



Norma Camacho
Interim Chief Executive Officer



Date

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Abbreviations and Acronyms

| | |
|-------------------|---|
| AB 32 | California Global Warming Solutions Act |
| ARB | California Air Resources Board |
| BAAQMD | Bay Area Air Quality Management District |
| BMP | Best Management Practices |
| CalFire | California Department of Forestry and Fire Protection |
| CalTrans | California Department of Transportation |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| cfs | cubic feet per second |
| CO | carbon monoxide |
| CVP | Central Valley Project |
| CWA | Clean Water Act |
| Delta | Sacramento-San Joaquin River Delta |
| CalTrans | California Department of Transportation |
| DPS | Distinct Population Segment |
| DSOD | Division of Safety of Dams |
| DTSC | Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| EFH | Essential Fish Habitat |
| EIR | Environmental Impact Report |
| GHG | Greenhouse gas emissions |
| GRCD | Grassland Resource Conservation District |
| GSA | Groundwater Sustainability Agency |
| HCP | Habitat Conservation Plan |
| hp | horsepower |
| kV | kilovolt |
| LOS | level of service |
| M&I | municipal & industrial |
| MVA | Mega Volt Amp |
| NAAQS | National Ambient Air Quality Standards |
| NCCP | Natural Community Conservation Plans |
| NEPA | National Environmental Policy Act |
| NMFS | National Marine Fisheries Service |
| NOP | Notice of Preparation |
| NO _x | nitrogen oxide |
| PG&E | Pacific Gas and Electric Company |
| PM | particulate matter |
| PM _{2.5} | particulate matter with a diameter of 2.5 microns or less |
| PM ₁₀ | particulate matter with a diameter of 10 microns or less |
| Project | Pacheco Reservoir Expansion Project |

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| Reclamation | U.S. Department of Interior, Bureau of Reclamation |
| ROG | reactive organic gases |
| RWQCB | Regional Water Quality Control Board |
| SAAQS | State Ambient Air Quality Standards |
| SBCWD | San Benito County Water District |
| SCCC | South-Central California Coast |
| SCVWD | Santa Clara Valley Water District |
| SGMA | Sustainable Groundwater Management Act |
| SLLPIP | San Luis Low Point Improvement Project |
| SR 152 | State Route 152/Pacheco Pass Highway |
| State Board | State Water Resources Control Board |
| SWPPP | stormwater pollution prevention plan |
| TAF | thousand acre feet |
| TDH | Total Dynamic Head |
| USACE | U.S. Army Corps of Engineers |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | United States Geological Survey |
| VHP | Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan |

CHAPTER 1 PROJECT DESCRIPTION

1.1 Introduction

This Initial Study and Notice of Preparation (NOP) has been prepared by the Santa Clara Valley Water District (SCVWD) as part of the Pacheco Reservoir Expansion Project (Project) to evaluate the potential physical, biological and cultural impacts of expanding the existing Pacheco Reservoir. The Project is being conducted consistent with the California Environmental Quality Act (CEQA), and other pertinent federal, state, and local laws and policies. SCVWD is serving as the lead agency for compliance with CEQA.

The primary partners in the Project include two local water agencies, Pacheco Pass Water District (PPWD) and San Benito County Water District (SBCWD), and eight south-of-Delta wildlife refuges in the San Joaquin River watershed named in the Central Valley Project Improvement Act that are managed by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and the landowners of privately owned and managed wetlands in the Grassland Resources Conservation District (GRCD). SCVWD, PPWD and SBCWD have executed a Principles of Agreement to (1) evaluate the potential benefits of expanding Pacheco Reservoir, and (2) develop a Water Storage Investment Program application for the Project.

The Project is a multi-agency effort that is expected to provide local, regional and statewide environmental, water supply reliability, and water quality benefits. These benefits include ecosystem improvements in Pacheco Creek for the federally threatened South-Central California Coast (SCCC) steelhead; increased water supplies for the Refuge Water Supply Program to support wetland-dependent wildlife populations; improved municipal and industrial (M&I) water supply reliability, including during drought periods and emergencies (e.g., Sacramento-San Joaquin Delta [Delta] outages); reduced San Luis Reservoir low point issues and improved water quality for Central Valley Project (CVP) San Felipe Division; and reduced flood risk along Pacheco Creek.

1.1.1 Background and Previous Studies

The existing Pacheco Reservoir and North Fork Dam were constructed in 1939 by PPWD to provide irrigation and domestic water supply. The existing Reservoir has an operational capacity of 5,500 acre-feet (AF). Water released from the Reservoir flows down Pacheco Creek and seeps through the creek bed and into the underlying groundwater aquifer as it winds towards its confluence with the Pajaro River. The released flow is controlled to fully infiltrate into a groundwater aquifer that begins at the northern tip in Santa Clara County and extends southwards into San Benito County. Agricultural users in PPWD and SBCWD's service areas pump water from the aquifer. Historic operation strategies for Pacheco Reservoir were informal, but generally effective for recharging the groundwater basins; however, water supply needs in the areas served by Pacheco Reservoir have changed since it was first constructed.

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The feasibility of expanding Pacheco Reservoir has been studied by SCVWD and U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for over 25 years. SCVWD began studying the expansion of Pacheco Reservoir in 1991 in order to efficiently use both contracted and supplemental imported water supplies and to provide increased reliability during dry water years. The *Reconnaissance Level Evaluation of Alternative Dam and Reservoir Site* (Wahler Associates 1993) evaluated 13 potential reservoir sites in Santa Clara County and developed four potential alternatives for an expanded reservoir on North Fork Pacheco Creek, near the existing North Fork Dam. Other potential reservoir sites included San Felipe, Packwood and Clarks Canyon in the Anderson Reservoir watershed; Blue Ride, Coe and Los Osos, in the Coyote Reservoir watershed; Smith Creek, high in a watershed that is tributary to Coyote Creek below Anderson Reservoir; and South Fork Pacheco, Ausaymas, Harper and Cedar Creek, in a small watershed tributary to Pacheco Creek (Wahler and Associates 1993).

San Luis Low Point Improvement Project (SLLPIP) studies further evaluated the feasibility of expanding Pacheco Reservoir in order to provide water supply reliability to SCVWD related to the frequency and duration of the low point issue in San Luis Reservoir. Previous SCVWD and Reclamation studies and reports that investigate the expansion of Pacheco Reservoir include the *San Luis Low Point Improvement Project Initial Alternatives Information Report* (Bureau of Reclamation 2008), *San Luis Low Point Improvement Project Plan Formulation Report* (Bureau of Reclamation 2011) and *San Luis Low Point Improvement Project Draft Feasibility Report* (Bureau of Reclamation 2013). The expansion of Pacheco Reservoir was evaluated as an alternative in the SLLPIP studies specifically to address water supply impacts related to San Luis Reservoir low point conditions. However, this alternative was screened out during the planning process because, at the time, only the SLLPIP benefits related to CVP water delivery interruptions were quantified for water supply reliability and these benefits were determined to be insufficient to justify projected costs. However, more recent technical investigations conducted by SCVWD have identified that a cost-effective, multi-objective project that, if constructed, could provide both public and non-public benefits: expanding the active storage capacity of the existing Pacheco Reservoir to 140.8 thousand acre-feet (TAF) through construction and operation of a new dam, conveyance facilities, and related appurtenant structures.

1.1.2 Santa Clara Valley Water District

SCVWD is a public agency that provides water supply, flood protection, and stream stewardship for Santa Clara County, and serves approximately 1.8 million people in 15 cities and unincorporated areas of Santa Clara County. SCVWD sells treated water to seven local water retailers, who in turn provide it to their customers. These retailers include: San Jose Water Company, California Water Service Company, City of Milpitas, City of Mountain View, City of San Jose, City of Santa Clara, and City of Sunnyvale.

As a Groundwater Sustainability Agency, SCVWD also manages the groundwater basins, which are the source of nearly half of Santa Clara County's water supply. Groundwater basins are replenished with local surface water and with imported water conveyed through the Delta. Imported water and local surface water also supply three drinking water treatment plants. SCVWD also collaborates and coordinates with local agencies and recycled water producers on recycled water development and use.

For flood protection, SCVWD carries out capital and maintenance projects throughout the year in neighborhoods across the County. In addition, SCVWD partners with cities and the County to provide open space and recreational opportunities at many of its 10 reservoirs and along creeks throughout the County.

1.1.3 CEQA Review

As the lead agency responsible for compliance with the CEQA, SCVWD has determined that the Pacheco Reservoir Expansion Project is a “project” for the purposes of CEQA (pursuant to CEQA Guidelines §15378), and would have the potential to result in significant environmental effects. Accordingly, SCVWD will be preparing an Environmental Impact Report (EIR) for the Project (CEQA Guidelines §15064).

This Initial Study, which is presented together with the NOP required by CEQA and the state’s CEQA Guidelines (California Code of Regulations (CCR) §15082), contains a brief description of the Project, including its goals and objectives and potential environmental impacts. It also outlines the process that will be used to determine the scope of analysis in the EIR, and provides an overview of the opportunities for participation in review of the EIR, along with contact information.

1.2 Project Setting

The Project includes both a primary and extended study area because of the potential influence of the proposed expansion of Pacheco Reservoir and subsequent system operations on resources over a broad geographic area. The primary study area includes the following:

- Pacheco Reservoir and the surrounding vicinity
- Pacheco Pumping Plant, near San Luis Reservoir, and surrounding vicinity
- Pacheco Creek
- Wildlife refuges within the San Joaquin River watershed that receive Incremental Level 4 water supplies

The extended study area includes the following:

- Pajaro River
- San Luis Reservoir and San Joaquin Valley water conveyance facilities
- SCVWD and Project partner service areas

Pacheco Reservoir is located in unincorporated Santa Clara County, approximately 17 miles northeast of the City of Gilroy and one mile north of State Route 152 (SR 152), as shown in Figure 1-1 and in detail in Exhibit 1. Pacheco Reservoir is situated on the North Fork of Pacheco Creek. Pacheco Creek has its headwaters in the Diablo Range, northeast of the City Hollister. Downstream of Pacheco Reservoir, North Fork Pacheco Creek is joined by South Fork Pacheco

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Creek, forming Pacheco Creek. Pacheco Creek continues to flow west until it reaches San Felipe Lake, draining approximately 168 square miles in Santa Clara and San Benito Counties. San Felipe Lake is formed by the confluence of Pacheco Creek, Tesquisquita Slough and Ortega Creek; and is drained by Miller Canal. Miller Canal joins the Pajaro River southwest of San Felipe Lake. The Pajaro River then flows southwest until it drains into Monterey Bay.

The existing Pacheco Reservoir, North Fork Dam, and related storage and conveyance infrastructure are currently owned and operated by PPWD. The existing Pacheco Reservoir inundates an area about 192 acres. The land surrounding Pacheco Reservoir is privately owned and is rural, primarily used for livestock grazing.

San Luis Reservoir is located eight miles east of Pacheco Reservoir in unincorporated Merced County. Reclamation owns and jointly operates San Luis Reservoir with the California Department of Water Resources (DWR) to provide seasonal storage for the CVP and State Water Project. San Luis Reservoir is capable of receiving water from both the Delta-Mendota Canal and the California Aqueduct. Deliveries from San Luis Reservoir also flow west through Pacheco Pumping Plant and Conduit to the San Felipe Division of the CVP, which includes SCVWD and SBCWD.

Project construction activities will primarily be conducted in and around Pacheco Reservoir, with some construction occurring under and over SR 152. In addition, construction activities will also occur at Pacheco Pumping Plant near San Luis Reservoir.

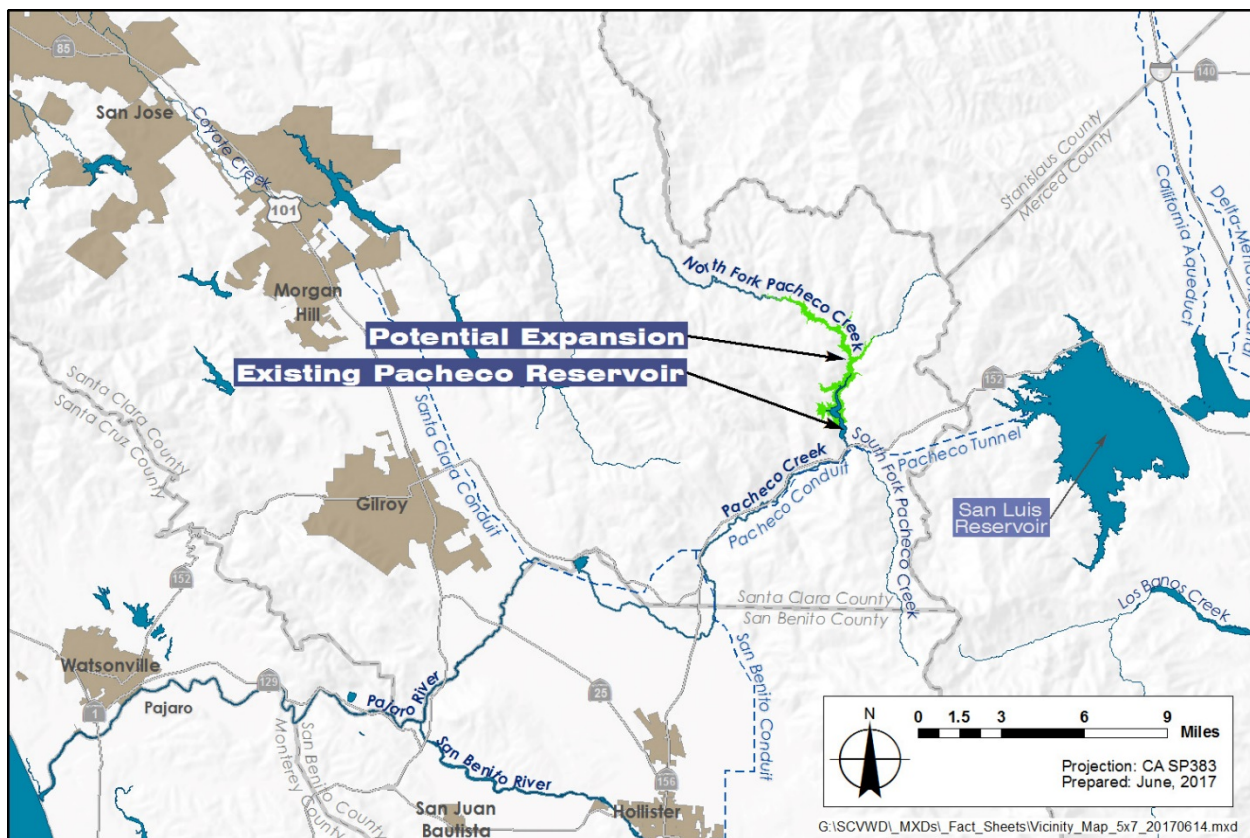


Figure 1-1. Project Location

If implemented, Project operations have the potential to affect eight wildlife refuges in the San Joaquin River Basin of the Sacramento-San Joaquin River Delta (Delta) that receive Incremental Level 4 water supplies.

Project operations also have the potential to affect four California groundwater basins, including seven groundwater subbasins. These subbasins, as defined by DWR Bulletin 118, include:

- Santa Clara Subbasin of the Santa Clara Valley Basin
- Llagas Area, Bolsa Area, Hollister Area, and the San Juan Bautista Area subbasins of the Gilroy-Hollister Valley Basin
- Pajaro Valley Subbasin of the Corralitos Basin
- Delta-Mendota Subbasin of the San Joaquin Valley Basin

1.3 Project Description

The Project includes construction and operation of a new dam and reservoir, pump station, conveyance facilities, and related miscellaneous infrastructure (e.g., access roads). The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam, and would inundate most of the existing Pacheco Reservoir. The proposed total storage for the new reservoir is 141.6 TAF, with an active storage of 140.8 TAF. Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of CVP supplies from Pacheco Pipeline, when needed.

1.3.1 Project Facilities

The Project would include: a new reservoir with a total active storage capacity of 140.8 TAF; a new earthen dam and spillway; new pipelines and tunnels connecting the new reservoir to the Pacheco Conduit; a new pump station; removal of the existing dam and associated channel modifications; a new regulating tank at Pacheco Pumping Plant; and access improvements. These facilities are shown in Figure 1-2 and detailed in Exhibit 2. Table 1-1 provides the physical features of the major Project components.

Chapter 1 – Project Description

Table 1-1. Physical Features of Major Project Components for the Pacheco Reservoir Expansion Project

| Project Component | Physical Features |
|--|--------------------------|
| New Dam and Reservoir | |
| Total Storage Volume | 141.6 TAF |
| Active Storage Volume | 140.8 TAF |
| Surface Area at Full Pool | 1,385 acres |
| Dam Crest Elevation | 719 feet msl |
| Full Pool Elevation | 694 feet msl |
| Dead Pool Elevation | 450 feet msl |
| Embankment Height | 319 feet |
| Dam Crest Length | 2,212 feet |
| Dam Embankment Volume | 12,475,688 cy |
| New Pump Station | |
| Pump Station Capacity | 490 cfs |
| Pump Station Lift | 170 feet |
| Pump Station Total Horsepower | 13,750 hp |
| Number of Pumps | 11 |
| Pipeline/Tunnels | |
| Diameter | 108 inches |
| Length | 4,700 feet |
| Pacheco Pumping Plant New Regulating Tank | |
| Capacity | 3 million gallons |
| Diameter | 150 feet |
| Hydraulic Head at Conduit Connection | 610 feet |
| Access Improvements | |
| 40-foot wide permanent roads | 2.7 miles |
| 25-foot wide temporary access road to spillway | 1.2 miles |
| 25-foot wide temporary haul road to borrow sites | 5.7 miles |
| Electrical transmission line | 16 miles |

Key:

cfs = cubic feet per second

cy = cubic yard

hp = horsepower

TAF = thousand acre feet

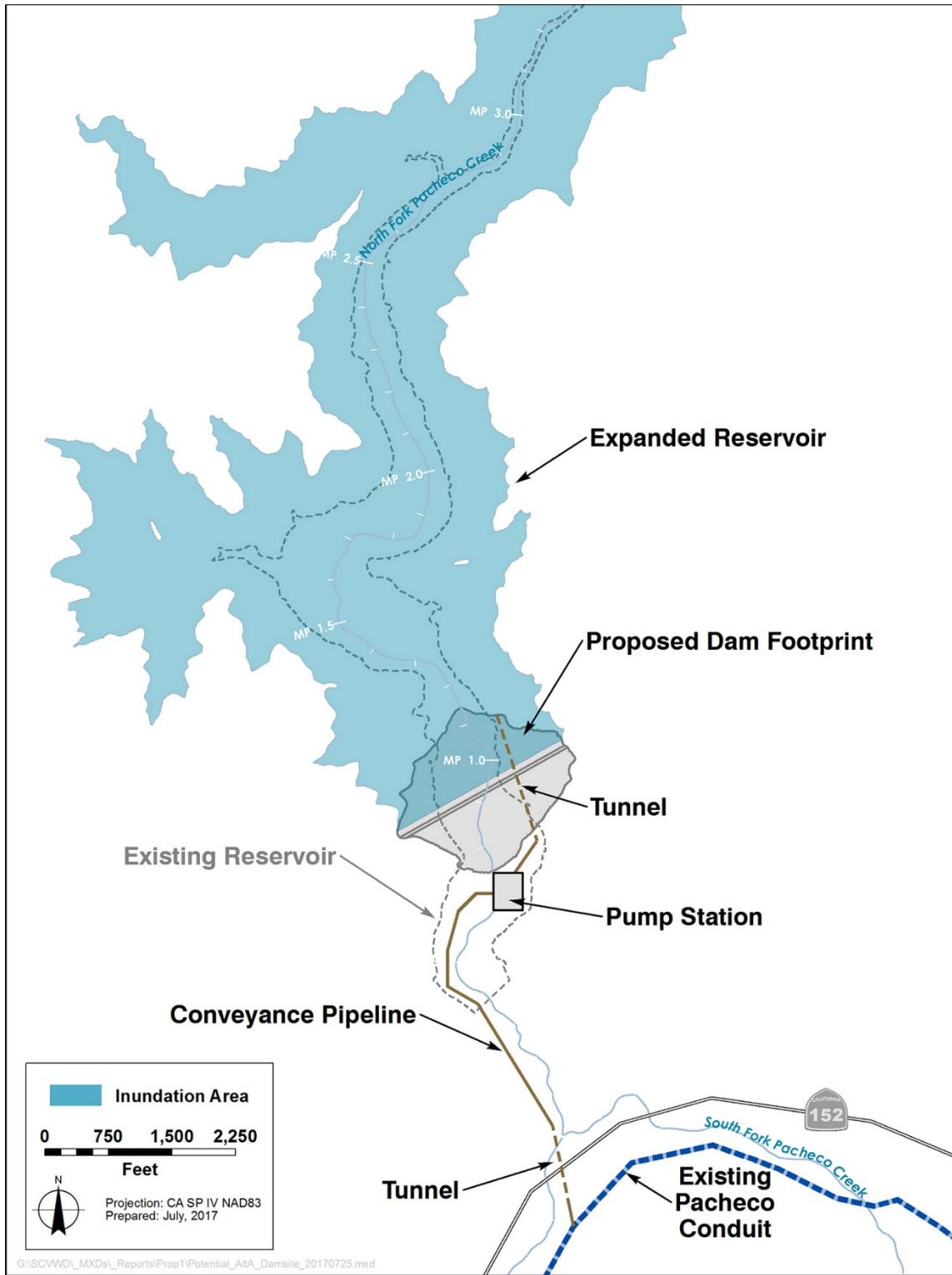
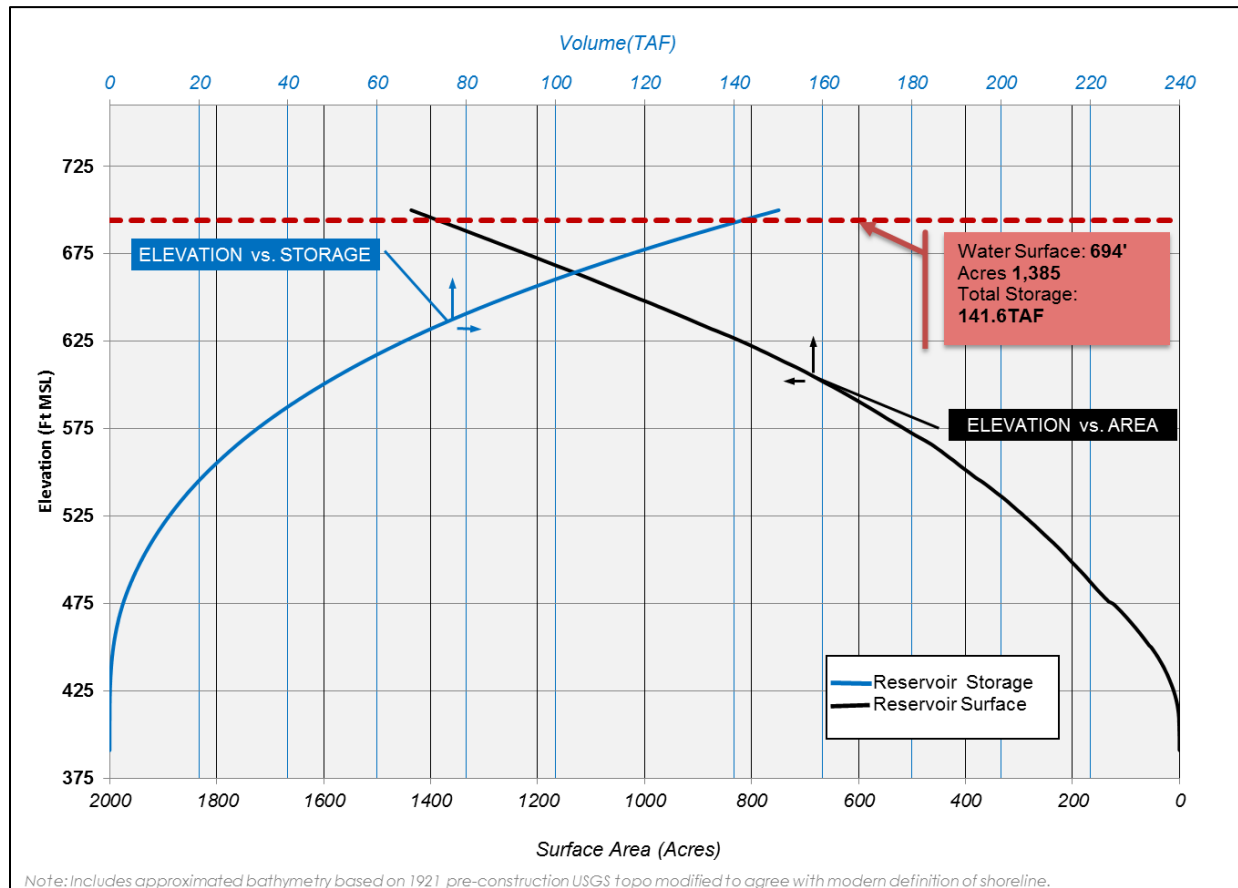


Figure 1-2. Major Project Facilities and New Dam Footprint

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Reservoir

The new dam and reservoir will be constructed approximately 0.5 mile upstream from the existing North Fork Dam as shown in Exhibit 3. The reservoir would have a total capacity of 141.6 TAF and an active capacity of 140.8 TAF. The full pool elevation would be 694 feet and would inundate an additional 1,245 acres, for a total of 1,385 total acres inundated. The dead storage volume would be 0.8 TAF with a corresponding water elevation of 450 feet. Figure 1-3 shows the area-capacity curve of the Project.



Key:

MSL = mean sea level

TAF = thousand acre-feet

Figure 1-3. Area/Capacity Curve of Proposed Project

The proposed location of the new dam was selected to maximize capacity and to avoid impacts to Henry W. Coe State Park. The low ground elevation at Henry W. Coe State Park elevation of 710 feet, would be 16 feet above the reservoir full pool elevation. The boundary of Henry W. Coe State Park would be approximately 1,700 feet upstream from the expanded reservoir.

Dam and Spillway

The new embankment dam would be a zoned earthfill structure consisting of an impervious core, flanked by an outer shell of random fill as shown in Exhibit 4. A zoned earthfill dam has been selected for this site because: 1) it would allow for advantageous use of local borrow

materials; (2) it could be designed to be seismically safe in a location with high seismic potential; and 3) it can accommodate a wide range of reservoir drawdown conditions. A system of filters and drains would be provided to control seepage through the dam and foundation. A downstream sand chimney filter would protect the impervious core. A gravel chimney drain located downstream of the chimney filter would convey drainage to a gravel blanket beneath the downstream random fill zone. The gravel blanket drain would convey seepage from the impervious core and overlie from the foundation beneath the downstream random fill zone to the downstream toe of the dam. Sand filter zones would be placed above and beneath the gravel blanket drain to protect the gravel drain from contamination of the overlying random fill and underlying foundation materials. The upstream slope of dam would be protected from reservoir wave action by a 3-foot thick riprap layer.

Ample spillway capacity must be provided for earth fill dams to prevent overtopping. The designed spillway capacity is dependent upon the hazard classification of the dam. The hazard classification depends upon the reservoir storage and dam height, and the potential for downstream damage resulting from dam failure. When there is a risk for loss of life due to dam failure, the California Department of Water Resources Division of Safety of Dams (DSOD) requires that the highest hazard classification be assigned. While there is little development in Pacheco Canyon downstream of the proposed dam, SR 152 is about one mile downstream of the dam, and dam failure might result in the loss of life on SR 152. Consequently, the spillway for the proposed dam will likely need to accommodate the probable maximum flood.

An uncontrolled side channel spillway with a trapezoidal cross section would be located adjacent to the right (west) abutment of the proposed dam. Due to the relatively steep topography at the dam site, a side channel spillway will reduce the amount of excavation required in order to accommodate the spillway control weir. The spillway features include an approach channel, discharge chute and stilling basin, all of reinforced concrete and founded on bedrock. The side channel spillway entrance would include an ogee weir. A flip bucket located at the end of the stilling basin would dissipate the remaining energy in the basin during high discharge events. After leaving the deflector bucket, spillway discharges would be conveyed through a riprap lined outlet channel into the restored Pacheco Creek channel (see below description). Exhibit 5 shows the profile view of the spillway.

Inlet/Outlet Facilities

The inlet/outlet facilities will consist of a sloping intake/outlet structure and a low-level inlet/outlet designed to provide deliveries to the reservoir from Pacheco Conduit and withdrawals from the reservoir to the conduit and Pacheco Creek. However, these facilities would not be operated to facilitate these flows at the same time. For withdrawals from the reservoir, under normal operating conditions, this inlet/outlet facility will need to simultaneously convey up 490 cub feet per second (cfs) to Pacheco Conduit and release up to 35 cfs to Pacheco Creek.

In addition, the DSOD requires that dams provide outlet facilities with sufficient capacity to evacuate the reservoir quickly, in the unlikely event that emergency conditions occur at the dam site. The DSOD guidelines indicate that large reservoirs should have the capability to lower the pool elevation by an amount equal to 10 percent of the hydraulic head behind the dam in 10 days. The inlet/outlet conveyance facilities have been sized to accommodate up to 1,350 cfs under emergency drawdown conditions. During emergency conditions, the outlet works would serve as an evacuation outlet for reservoir draw down.

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As shown in Exhibit 2, the inlet/outlet facilities would consist of the following structures from upstream to downstream:

- Sloping inlet/outlet structure and low level inlet/outlet,
- Gate valve to switch between delivery/withdrawal operations,
- Conveyance tunnel beneath the dam,
- Valve chamber vault and walk-in tunnel,
- Control gatehouse, and
- Discharge pipe and outlet return channel to Pacheco Creek.

A sloping intake structure would be located north of the left (east) abutment and would consist of a single 132-inch diameter reinforced-concrete structure, with approximately 10 ports located at various elevations for drawing from the reservoir. The sloping inlet/outlet structure for the dam would allow for withdrawals from the reservoir at selected intervals to take advantage of the best water quality (i.e., temperature) in the reservoir. A low-level reservoir inlet would also be constructed, with an inlet elevation of 450 feet, for reservoir drainage. A hydraulically operated gate valve structure would be located upstream of the reinforced-concrete sloping intake to allow for switching between reservoir delivery (through the tunnel) and withdrawal operations (through the outlet structure).

A 2,300-foot long conveyance tunnel would be constructed under the dam abutment to connect the intake structures and the pump station. The conveyance tunnel would be excavated through the bedrock on the left abutment of the dam as shown on Exhibit 2. A profile of the tunnel is shown on Exhibit 6. A 132-inch (inside diameter), concrete-lined tunnel would be located beneath the upstream portion of the dam and would connect the valve chamber vault to the sloping intake structure. The segment beneath the downstream portion of the dam would be a concrete-lined, 192-inch (inside diameter) walk-in tunnel with a 132-inch diameter steel carrier pipe. The walk-in tunnel would allow for access to the steel carrier pipe and valves, located in the valve chamber vault beneath the crest of the dam. The valve chamber vault between the upstream and downstream portion of the tunnel would allow for maintenance and inspection of the downstream tunnel, carrier pipe, and gate valve. The valve chamber vault would consist of a gate valve and upstream guard valve.

The control gatehouse structure would be used to regulate outlet flows from the reservoir to the pump station, for normal releases, and the discharge channel for stream augmentation and emergency releases. Mechanical and physical energy dissipaters would be located at the gatehouse to help control releases.

To connect the new outlet works to Pacheco Creek, the historical Pacheco Creek channel would be restored between the new dam and the existing dam through the existing Pacheco Reservoir. The existing dam would be removed only as part of the Project. If the Project is not implemented, SCVWD has no responsibility related to the existing dam. Restoration of the channel would include excavating a new 1,500-foot long, 1.7-foot deep, one-foot wide, low-flow

channel, and a 6-foot deep, 20-foot wide overbank channel to facilitate riparian restoration. The channel will be designed to reduce streambank erosion (e.g., using bank stabilizing materials), and riparian vegetation will be planted to initiate growth of a new riparian forest along the restored channel.

Pacheco Reservoir Pump Station

The Pacheco Reservoir Pump Station would serve as a two-way pump station that both delivers water to, and withdraws water from the Pacheco Reservoir. The water surface elevation of the new reservoir would have an operating range of 450 feet to 694 feet; however, at the connection point to the Pacheco Conduit the total hydraulic head would be 610 feet. This requires a “two-way” system operating both by gravity and through a booster pump station under the following scenarios:

Conveyance from Pacheco Conduit to New Reservoir:

- Gravity conveyance when the new reservoir water surface is between 450 feet to 600 feet; and
- Pumped conveyance when the new reservoir water surface is between 600 feet to 694 feet.

Conveyance from New Reservoir to Pacheco Conduit:

- Gravity conveyance when the new reservoir water surface is between 694 feet to 620 feet; and
- Pumped conveyance when the new reservoir water surface is between 620 feet to 450 feet.

The conveyance system would contain 10 feet of dynamic head loss that is included in the scenarios above. Isolation valves would enable the pump station to deliver water to, or pump water from, the reservoir. Pressure-reducing sleeve valves were identified as necessary to reduce excess pressure head under certain gravity-flow conditions. These valves would be used only when needed and bypassed at all other times. Additionally, pressure relief valves and discharge structures would be required to prevent over-pressurization of the existing Pacheco Conduit. Flow diagrams of the above scenarios are presented in Exhibit 7 and hydraulic profiles are presented in Exhibit 8.

The pump station would be below the new dam (see Exhibit 2). To provide security and minimize noise levels in the surrounding area, the pumps would be housed in a building. Space has been identified for other facilities on site, including intake, access, parking, surge tanks, power substation, yard piping, and construction staging. The site footprint and conceptual layout for the pump station is shown in Exhibit 9.

The new pump station would need to meet a wide range of lift (0 to 160 feet static plus 10 feet dynamic) and high flow (490 cfs). A single pump station with multiple pump ranges has been proposed to meet these requirements—while preventing pump station horsepower (hp) duplication—limiting the amount of head burned by pump control valves, and minimizing cost. The primary range would be 0 to 94 feet of total dynamic head (TDH), or approximate water surface elevations of 526 to 694 feet (13.6 TAF to 141.6 TAF of total storage). The second

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range would be 94 to 170 feet of TDH, or water surface elevation of 450 to 526 feet (5 TAF to 25 TAF of storage). The second range would be accomplished by physically adding additional stages to the pumps, and would only be necessary during unusually dry years to convey the remaining 20 TAF out of the new reservoir. A total of 11 pumps (10 duty plus 1 standby) are planned, however the pump configuration may be refined during future design studies. The pump motors would be sized for the first operating range (higher lift) at 1,250 hp each (13,750 total hp).

Electrical Service to Pump Station

The 14 mega volt amp (MVA) substation for the new reservoir pump station is located in the Pacific Gas and Electric Company (PG&E) service area, with no other nearby service sources. PG&E has a 70 kilovolt (kV) transmission line that cannot support the additional 14 MVA connected load, and it will need to be upgraded to support the increased load. The existing 70 kV transmission line would be upgraded to two circuits, for use by the double-ended substation arrangement for this Project.

Conveyance from Pacheco Reservoir Pump Station to Pacheco Conduit

A pipeline would be constructed to connect the new pump station located immediately downstream of the new dam and the existing Pacheco Conduit as shown in Exhibit 2. The proposed pipeline would be 9 feet in diameter and about 4,700-feet long, with a design capacity of 490 cfs. This pipeline would allow for delivery of imported water from the Pacheco Conduit to the proposed reservoir for future release, and would also provide for reservoir releases to the Pacheco Conduit.

Construction would be by conventional excavation, open trench, and backfill—except for the length of pipe located under SR 152. The length of pipe that would be located under SR 152 and Pacheco Creek would be installed using bore and jack techniques (i.e., tunneling techniques), to minimize impacts during construction. Spoils would be hauled off and disposed of at a suitable location. The tunnel, when completed, would be a 132-inch casing containing a 108-inch carrier pipe. There would also be permanent structures for appurtenances, such as air/vacuum valves, vaults, drains and blowoffs for the conveyance line.

The connection of the pipeline to the existing Pacheco Conduit would be southeast of the existing North Fork Dam, at the location shown in Exhibit 2. The connection would be with a tee in the Pacheco Conduit, with an isolation valve for the turnout (inlet and outlet) for the new reservoir.

New Regulating Tank at Existing Pacheco Pumping Plant

Controls to turn pumps on or off remotely would be based on the water level within the new Pacheco Reservoir and regulating tanks at the existing Pacheco Pumping Plant site near San Luis Reservoir. A second regulating tank at the existing Pacheco Pumping Plant site will be added adjacent to the existing regulating tank to provide additional control buffer and surge control for the new Pacheco Reservoir Pump Station. The new regulating tank would match the elevation, diameter, and materials of the existing tank. This would add a 2nd 3 MG (10 AF), 150-foot diameter reservoir, as shown in Exhibit 10. Additional piping, valving, and controls would be required.

1.4 Project Construction

1.4.1 Preliminary Schedule

The environmental compliance, design, permitting, land acquisition, and financial and institutional arrangements are anticipated to be completed in 2023. Construction is anticipated to take approximately five-and-a-half years from 2024 to 2028. The estimated on-line date is 2029.

1.4.2 Site Preparation

Borrow Areas

Preparation of borrow areas would include the reservoir borrow areas, the spillway area, and the existing dam site prior to its removal. Preparation would include logging, stripping and disposal of topsoil, and implementation of any associated work access or material processing areas. It is assumed that the material processing areas could include a crushing and screening plant at the filter and drain borrow area and a concrete batch plant near the spillway excavation.

Exhibit 11 presents potential borrow areas. The area for impervious borrow materials would be located upstream of Turkey Flat, with material in this area classified as low-plasticity silt or clay. The potential random fill borrow area is just above Turkey Flat, and the material consists of a mix of silt, sand, gravel, and boulders. The proposed rock borrow area is along Pacheco Creek, just above Turkey Flat. Through field observation, the material in this area was determined to be primarily cemented greywacke sandstone.

Approximately 5.75 miles of 25-foot-wide haul road would be required to access the reservoir borrow areas upstream of the embankment location. The haul road would follow an existing access road along Pacheco Creek that would need to be improved. Construction access roads totaling 4 miles and 25-foot wide would need to be constructed across the stream, downstream of the embankment, to access the spillway area. One and a half miles of these construction roads will improve existing access roads, providing permanent access to the site post-construction. An existing bridge over the stream would need to be improved.

Inlet/Outlet Construction

Construction of the tunnel and pipe between the inlet/outlet structure and pump station area would be accomplished as a site preparation activity; either by open-cut excavation, tunneling, or a combination of excavation and tunneling. The low-level intake would also be completed to allow diversion of the stream through the outlet structure for the duration of the following embankment construction. Construction of the outlet tunnel could include excavation for, and construction of, the pump station lower level, that will act as the energy dissipation and discharge pipeline and channel to return flow to the stream below the dam.

Construction methods are anticipated to consist of clearing, grubbing, stripping, and disposal of topsoil; and grading consisting of excavation of soil and rock, filling, and compacting. Blasting of hard, fractured rock may be used to expedite excavation, but it is anticipated to be very limited during site preparation. Site preparation activities would include diversion of surface water, implementation of erosion and sediment controls, and establishment of a construction management area, including placement of temporary construction trailers. Site preparation activities may also include stabilization of potential or active landslide areas.

1.4.3 Dam Construction

Construction activities for the new dam and reservoir would include removing the existing North Fork Dam, and constructing a temporary cofferdam, new embankment dam, and spillway.

Dam Removal

Demolition of the North Fork Dam of the existing Pacheco Reservoir would begin as the water level is drawn down through the outlet and would be completed once the reservoir is fully drained. Removal of the existing dam would proceed from the top down to prevent steep slopes and to minimize the potential for slope failure. Material excavated from the dam, deemed suitable for earth fill, will need to be directly hauled to the temporary cofferdam site for placement and compaction. Unsuitable material will be stockpiled for disposal off-site. Sand, gravel, cobbles, and rock may be segregated from the excavated material and used for site restoration. Bank stabilization and channel reconfiguration will be performed once the dam is removed, and any planned riparian and aquatic habitat enhancements will be implemented, such as creating pools, adding boulders, installing logs, and enhancing irregular edges.

Cofferdam

The temporary cofferdam would be constructed at the upstream toe of the new dam footprint, following or concurrent with completion of the outlet construction, preferably during the dry season when flows in Pacheco Creek are low. The cofferdam crest elevation is 500 feet, and was sized to ensure that flows in Pacheco Creek are maintained during construction while accommodating at least a 20-year flood event and would accommodate the 50-year flood event. Foundation preparation for the cofferdam would be similar to that for the main embankment, and would consist of over-excavation of alluvium from the valley bottom and surficial soils along the abutments. The foundation and embankment of the cofferdam would be incorporated into the dam. Material used to construct the cofferdam would be imported from the random fill borrow sources, spillway excavation, and removal of the North Fork Dam.

Embankment Construction

Initial preparation of the dam footprint will consist of clearing and grubbing of vegetation, removal of soft sediments and other deleterious materials, and shaping of the abutment side slopes. Form of slope protection may be needed to mitigate the potential for landslides and shallow-slope failures during construction. Dam foundation construction would include excavation of existing-channel alluvial materials to competent bedrock; loading and hauling excavated materials in the foundation footprint to stockpiles; cleaning of the foundation in the core and earth fill zones (zones defined in Exhibit 4); surface treatment of the impervious-core foundation by excavating shear zones and backfilling with dental concrete/grout; and set-up, mix, and installation of a cutoff wall beneath the cores (grout curtain). Materials excavated from the foundation area could be stockpiled and reused in the earth fill areas of the embankment.

Embankment construction activities would include processing, excavating, loading, hauling, placing, and compacting of impervious core, adding earth fill, and draining and filtering of materials from borrow areas. Processing materials at the borrow sites will likely include, at a minimum, moisture conditioning. Drain and filter materials are anticipated to be sourced from local commercial vendors or facilities. Additional moisture conditioning may be required at the dam site as the materials are placed and compacted. It is anticipated that up to four concurrent material placement and compaction operations could be occurring at the same time as the embankment elevation is raised.

Spillway Construction

Spillway construction will consist of completing excavation to final grades; formwork and placement of concrete for the base and walls of the entrance channel; chute and energy dissipation and stilling basin; and backfilling of walls, and final grading and erosion protection for the excavation slopes.

Types of Activities

Construction methods for dam removal and the cofferdam would consist of clearing, grubbing, stripping, and disposal of topsoil, and grading consisting of excavation of soil and rock, filling, and compacting. Construction methods for the new embankment and spillway include excavation and processing of borrow materials; hauling, placing and compacting fill and backfill; and forming and placing concrete.

1.4.4 Pump Station and Conveyance to Pacheco Conduit Construction Methods

Excavations to competent bearing material would need to be performed to construct the proposed pump station and appurtenant structures. The pump station and surge tanks are anticipated to be reinforced-concrete structures, and the electrical substation an open-graveled area with concrete mat and pedestal foundations for the electrical gear and towers. Security fencing would be required around all above-grade facilities.

A temporary and permanent construction easement would be required for the conveyance pipeline to the existing Pacheco Conduit. A potential corridor for the high-capacity electric transmission lines to the pump station could be located adjacent to the permanent easement from the pipeline. The pipeline would be constructed in an open-trench excavation and backfilled with imported bedding material and native backfill to existing grade. A series of permanent structures for appurtenances (i.e., air/vacuum valves, vaults, drains, and blowoffs) would be placed along the pipeline right-of-way. These structures would generally be below-grade and positioned directly over, or adjacent to, the conveyance pipeline.

Types of Activities

Construction methods for the pump station, surge tanks, and electrical substation would consist of excavation for basements, foundations, and building pads; preparing formwork and pouring concrete; installation of pumps and equipment; and final finishing of the interior.

Construction of the conveyance pipeline to the Pacheco Conduit would generally consist of conventional trench excavation and backfill. However, the section of the pipeline passing beneath SR 152 would be constructed using jack and bore trenchless methods.

1.4.5 Access and Staging Areas

Site access for the tunnel would include constructing new haul and access roads in conjunction with making improvements to existing roadways, as shown in Exhibit 12. Wherever possible, the alignment of these roads would follow the existing unimproved roads or four-wheel-drive trails.

The access road from SR 152 to the dam site would be about 2.74 miles long. It is anticipated that the road would eventually be completed as an approximately 40-foot wide, asphalt-paved, two-lane road. Preparing a temporary construction road with this width would allow two-way traffic during construction.

1.5 Project Operations

The expanded reservoir would be filled using a combination of 1) natural hydrology within the North Fork Pacheco Creek basin, including the East Fork, and 2) SCVWD-owned water from San Luis Reservoir under CVP contract. Historically, the natural hydrology of the North Fork Pacheco Creek watershed (upstream of the Project) yielded up to 44,000 AF/year, with an average of approximately 13,000 AF/year. These inflows are typically realized from December through March, and are affected by timing of precipitation, antecedent conditions, amount of precipitation, and evaporation. SCVWD would need to obtain a new water right from the State Water Resources Control Board (State Board).

CVP water, owned by SCVWD, will be conveyed from San Luis Reservoir to Pacheco Reservoir through the existing Pacheco Conduit. A new conveyance pipeline will connect Pacheco Conduit to Pacheco Reservoir. SCVWD will deliver CVP water to Pacheco Reservoir as needed throughout the year; however, the water will only be delivered to the SCVWD water system when SCVWD demands exceed supplies.

This Project would be operated by SCVWD to both improve habitat conditions for steelhead in Pacheco Creek and improve SCVWD water supply reliability, including during drought periods and emergencies. Table 1-2 summarizes the average monthly release targets to Pacheco Creek from the expanded Pacheco Reservoir.

Table 1-2. Average Monthly Release Targets to Pacheco Creek from Expanded Pacheco Reservoir

| Month | Average Monthly Release Targets to Pacheco Creek (cfs) ¹ |
|-----------|---|
| January | 10 |
| February | 10 |
| March | 20 |
| April | 20 |
| May | 12 |
| June | 13 |
| July | 14 |
| August | 14 |
| September | 14 |
| October | 14 |
| November | 10 |
| December | 10 |

Notes:

¹ Releases from Pacheco Reservoir may be adjusted based on high flows in the south fork of Pacheco Creek.

Key:

cfs = cubic feet per second

The average monthly release targets shown in Table 1-2 incorporate the biological needs of the SCCC steelhead for higher flows in March and April for outmigration. The winter releases listed in Table 1-2 may be reduced depending on flows in the South Fork of Pacheco Creek. In addition, during heavy precipitation events, releases from the expanded reservoir will be reduced to minimize flooding risks along Pacheco Creek and the Pajaro River. Releases to Pacheco Conduit, to meet SCVWD water demands, may be reduced or discontinued when

storage levels in the expanded Reservoir fall below 55 TAF. This will ensure that flow and water temperatures in Pacheco Creek (below the new dam) are maintained in consecutive dry years.

1.5.1 Central Valley Project/State Water Project Operations

As part of the Project, SCVWD will transfer 2,000 AF of its CVP water contract (in below normal water years), directly or through transfer and exchanges, in perpetuity to Reclamation and USFWS' Refuge Water Supply Program (RWSP), for use in the Incremental Level 4 water supply pool for wildlife refuges. While Reclamation sets priorities for Incremental Level 4 distribution, SCVWD has expressed its desire that the transferred water be designated to refuges supported by GRCD. The water will be used to flood wetlands, directly benefiting wetland-dependent wildlife populations. The delivery schedule of this water will be flexible, but could be delivered as early as March or April. This water could be stored in San Luis Reservoir, providing the Refuge Water Supply Program greater flexibility in making late season deliveries to refuges. For deliveries to GRCD, deliveries will be made to Los Banos through the Delta-Mendota Canal.

1.5.2 Santa Clara Valley Water District Operations

SCVWD would use the Project for operational storage within their system as well as for emergency supply. SCVWD accesses its CVP contract water through the Pacheco Conduit. This Project includes construction of an inlet/outlet facility connecting to then the conduit that takes water from Pacheco Conduit to the Project as well as from the Project to Pacheco Conduit. During years when SCVWD water supplies exceed the water demands in the SCVWD service areas and excess storage capacity is available in the expanded reservoir, SCVWD would convey CVP supplies from San Luis Reservoir through Pacheco Conduit and into the expanded Pacheco Reservoir. Conveyance and storage of these CVP supplies is anticipated to occur primarily in wet years. The rate at which these transfers are made between San Luis Reservoir and Pacheco Reservoir will depend on supply allocations, water demands, and availability of other water supplies.

1.6 Project Benefits

These benefits of the Project include:

- *Ecosystem Improvements in Pacheco Creek:* The Project is expected to increase suitable habitat in Pacheco Creek for the federally threatened SCCC steelhead. The National Marine Fisheries Service (NMFS) includes the Pacheco Creek and the Pajaro River in the *South-Central California Steelhead Recovery Plan (2013)*. The Recovery Plan identifies that a critical recovery action for SCCC steelhead is to ensure that the pattern and magnitude of water releases to Pacheco Creek from Pacheco Reservoir provides the essential habitat functions to support the life history and habitat requirements of both adult and juvenile life stages. The Project has the potential to provide substantive beneficial improvements to SCCC steelhead habitat conditions in Pacheco Creek through improved flow and temperature conditions. If the project is implemented, the removal of North Fork Dam would also allow for restoration of additional habitat for SCCC steelhead and other aquatic species.

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- *Ecosystem Improvements in the San Joaquin River Watershed:* Increased storage capacity provided by the Project would allow SCVWD to provide up to 2,000 acre-feet of water to wildlife refuges in the San Joaquin River watershed during below normal water years. The Refuge Water Supply Program was established jointly by the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) and U.S. Fish and Wildlife Service pursuant to the Section 3406(d) of the 1992 Central Valley Project Improvement Act. As part of the Project, SCVWD will provide incremental Level 4 water supplies to the Program in below normal years, when water for environmental management is increasingly needed. The water provided to the Refuge Water Supply Project will directly benefit wetland-dependent wildlife populations.
- *Municipal and Industrial (M&I) Water Supply:* The Project is expected to provide water supply reliability benefits to help meet M&I water demands in Santa Clara County during drought periods and to address shortage due to regulatory and environmental restrictions. Through development of new local supplies and increased ability to fully utilize imported water supplies, the Project will improve water supply reliability and increase operational flexibility of regional water systems.
- *Emergency Response:* The Project is expected to provide emergency water supplies in the event of disruption in Delta water supplies. Catastrophic events in the Delta, such as levee failures or an earthquake, would result in a significant disruption of imported water sources to SCVWD's service area. In an emergency situation, the Project could deliver, either directly or by exchange, water to any retail water agency served by SCVWD.
- *Flood Damage Reduction:* The Project is expected to reduce flood damages along Pacheco Creek. Flooding has historically occurred along Pacheco Creek downstream of the existing North Fork Dam. Through design of project features and incidental increased storage during the flood season, the Project has the potential to significantly reduce downstream flood flows and corresponding flood stages along Pacheco Creek.

1.7 Environmental Review

Information about the Project, and the environmental analysis will be used by several agencies as part of their decision-making process regarding regulations applicable to the Project. The Project description, location, and the potential environmental effects are contained in this Initial Study and NOP.

1.7.1 Topics to be Analyzed in EIR

Based on the potential for the proposed Project to result in significant impacts on the environment, SCVWD has determined that an EIR is the appropriate level of environmental review. The EIR will assess the proposed Project's effects on the environment, identifying potentially significant impacts and feasible mitigation measures to reduce or eliminate those impacts. An analysis of alternatives to the proposed Project will also be included in the EIR. Topics to be analyzed in the EIR, include but are not necessarily limited to the following: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology

and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation and traffic, tribal cultural resources and utilities and service systems. Responses received to the NOP may modify or add to the preliminary assessment of potential issues that will be addressed in the EIR.

1.7.2 Environmental Procedures

The NOP initiates the CEQA process, through which SCVWD refines the range of issues and Project alternatives to be addressed in the draft EIR. Comment are invited on both the proposal to prepare the EIR and on the scope of issues to be included in the EIR. Please submit any comments on the NOP and scope of issues to be included in the EIR within 30 days of receipt of this notice to Melih Ozbilgin, Senior Water Resources Specialist, at SCVWD (see contact information below). After the 30-day review period for the NOP is complete and all comments are received, a draft EIR will be prepared in accordance with CEQA, as amended (Public Resources Code §21000 et seq.), and the State Guidelines for Implementation of CEQA (CCR §15000 et seq.).

Once the draft EIR is completed, it will be made available for a 45-day public review and comment period. Copies of the draft EIR will be sent directly to those agencies commenting on the NOP, and will also be made available to the public at a number of locations, including SCVWD headquarters. Information about availability of the draft EIR will also be posted on SCVWD's website (<http://www.valleywater.org>).

1.8 Contact Information

For further information, contact the following:

Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686
(408) 630-2725
mozbilgin@valleywater.org

Additional information relevant to the project, and the draft EIR, can be found at <http://www.valleywater.org>.

CHAPTER 2 ENVIRONMENTAL EVALUATION

2.1 Overview

| | |
|-------------------------------------|---|
| Project Title: | Pacheco Reservoir Expansion Project (Project) |
| Lead agency name and address: | Santa Clara Valley Water District 5750 Almaden Expressway San Jose, California 95118 |
| Contact person and phone number: | Melih Ozbilgin, Senior Water Resources Specialist, (408) 630-2725 |
| Project location: | The project is located in unincorporated Santa Clara County. The project area extends from Pacheco Reservoir to Monterey Bay, following Pacheco Creek and the Pajaro River, and covering portions of unincorporated Santa Clara and San Benito Counties. USGS quadrangles in the project area include: Mustang Peak, Pacheco Peak, Pacheco Pass, Three Sisters, San Felipe, Chittenden, Watsonville East, Watsonville West, and Moss Landing. |
| Project sponsor's name and address: | Santa Clara Valley Water District 5750 Almaden Expressway San Jose, California 95118 |
| Land designation: | Land zoning designations for the parcels are agricultural ranchlands. Surrounding land uses include grazing, water storage and residential. |

Key:
USGS = United States Geological Survey

2.2 Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by the Project as indicated by the checklist on the following pages.

Table 2-1. Environmental Factors Potentially Affected

| | | | | | |
|---|---------------------------|---|-------------------------------------|---|------------------------------------|
| X | Aesthetics | X | Agricultural and Forestry Resources | X | Air Quality |
| X | Biological Resources | X | Cultural Resources | X | Geology / Soils |
| X | Greenhouse Gas Emissions | X | Hazards and Hazardous Materials | X | Hydrology / Water Quality |
| X | Land Use / Planning | | Mineral Resources | X | Noise |
| X | Population / Housing | X | Public Services | | Recreation |
| X | Tribal Cultural Resources | X | Utilities / Service Systems | X | Mandatory Findings of Significance |

2.3 Evaluation of Environmental Impacts

The degree of change from existing conditions—caused by the Project—is compared to the impact evaluation criteria, to determine if the change is significant. Where it is determined that one or more significant impacts could result from implementation of the Project, mitigation

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measures would be developed to reduce or eliminate the significant impacts. Existing conditions serve as a baseline for evaluating the impacts of the Project.

The following terminology is used in this document to describe the various levels of environmental impacts associated with the Project:

- A finding of “no impact” is identified if the analysis concludes that the proposed Project would not affect a particular environmental topical area in any way.
- An impact is considered “less than significant” if the analysis concludes that the proposed Project would not cause a substantial adverse change in the environment.
- An impact would be considered to have “potentially significant” issues if the analysis concludes that the proposed Project could cause a significant environmental impact. Proposed projects that potentially produce a significant impact(s) warrant the greater level of analysis and consideration provided by an EIR.

A brief explanation is required for all answers, except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved. A “No Impact” answer should be explained when it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2.4 CEQA Environmental Checklist

2.4.1 Aesthetics

Table 2-2. Aesthetics Checklist

| I. AESTHETICS: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---------------------------------------|-------------------------------------|------------------|
| a) Have a substantial adverse effect on a scenic vista | | X | |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings with a designated scenic highway? | X | | |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings | X | | |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area | | X | |

Environmental Setting

Pacheco Reservoir is located in the Diablo Range in southeastern Santa Clara County (see Exhibit 1). The region is characterized by rolling hills and small valleys, with occasional rock outcrop. The Reservoir exists in a landscape with few large water bodies, so the reservoir and shoreline create a sharp visual contrast to the surrounding hills and valleys.

A majority of the area surrounding Pacheco Reservoir is rural, pastoral landscape of open space. The environment surrounding the Reservoir is relatively undeveloped, consisting of a few private ranches and residences, the North Fork Dam facilities, and telephone and electricity transmission lines. Current views of the North Fork Dam are limited to the few private residential and ranching properties surrounding the reservoir.

Henry W. Coe State Park is located northwest of Pacheco Reservoir. No views of the Reservoir exist from any scenic overlooks, trails or roads within the park. The new dam and spillway would not be visible from trails or roads within the park, due to natural topography of the area. However, small portions of the reservoir may be visible from locations of Kaiser-Aetna Road, which leads to the Dowdy Ranch Area and Visitor Center.

Pacheco Reservoir is located about two miles north of SR 152, also called the Pacheco Pass Highway. Although the portion of SR 152 within Santa Clara County is not an officially designated state scenic highway, it is eligible for designation, and is included as part of the Scenic Road System of Santa Clara County (County of Santa Clara 1994, CalTrans 2017). Due to the rugged terrain, the existing dam is not within the view of SR 152. Portions of the new dam would be visible along SR 152. In addition, trees and outcroppings visible from portions of SR 152 may be impacted or removed during construction of the dam or inundated as part of the new reservoir.

Explanations for I. Aesthetics

- a) **Less than Significant Impact.** A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape, for the benefit of the general public. The new dam forming an expanded Pacheco Reservoir will be located on Pacheco Creek near Pacheco Pass and may provide scenic views to people in the Project vicinity. However, the reservoir and existing facilities by themselves do not include remarkable landscapes elements that create scenic vistas. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts on scenic vistas that may result from construction of the Project.

- b) **Potentially Significant Impact.** Although the portion of SR 152 within Santa Clara County is not an officially designated state scenic highway, it is eligible for designation, and is included as part of the Scenic Road System of Santa Clara County (County of Santa Clara 1994, CalTrans 2017). Santa Clara County is currently seeking official state designation of the portion of SR 152 from the Pacheco Pass to the Santa Clara County-Merced County border. Portions of the new dam would be visible along SR 152. Temporary night lighting used during Project construction may be visible from SR 152. In addition, trees and outcroppings visible from portions of SR 152 may be damaged or removed during construction of the dam or inundated as part of the expanded reservoir. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts on scenic resources that may result from construction of the Project.

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- c) Potentially Significant Impact.** Construction activity—including the presence of equipment, vehicles, and construction personnel—would temporarily degrade the quality of views in the area. The impact on visual quality associated with construction would be limited to the few residential and ranching properties surrounding the reservoir. Although construction of the project would occur over multiple years, construction would occur in various sites over multiple phases, limiting the impact to surrounding residents.

Several borrow areas have been identified upstream of the existing reservoir. Preparation of these borrow areas may include removal of trees and grading. Most of the borrow areas would be inundated by the expanded reservoir. Those areas not inundated would be revegetated after use.

Implementation of the proposed Project would require complete dewatering of the existing reservoir, which would temporarily degrade the existing visual character or quality of the site. Views of the dewatered reservoir would be limited to the few residential and ranching properties surrounding the reservoir. The impacts to the visual resources from dewatering of the reservoir would be temporary, and would have limited impact on those properties.

The Project would increase the inundated area by an additional 1,245 acres. This would substantially change the scenic quality and character of the Project area. The overall visual effect of raising the water level at the reservoir would be relatively minor because substantial portions of the vegetated landscape would remain visually intact and views of the expanded reservoir would be limited. SCVWD will prepare an analysis of the potential impacts to visual resources associated with construction of the proposed Project features and future operations. Effects on the visual resources are considered potentially significant. The EIR will further evaluate potential impacts on the visual character or quality of the Project site that may result from construction of the Project.

- d) Less than Significant Impact.** Construction activities may require double shifts—two, 10-hour shifts per day, up to six days per week—to meet the construction schedule. Therefore, nighttime lighting may be required during the temporary construction period. Nighttime construction lighting would be directed away from the two single-family homes south of the North Fork Dam. As a result, the exposure of residents or other viewer groups to construction lighting is anticipated to be minimal, and this impact is accordingly considered less than significant.

Following construction, existing lighting would be replaced with new permanent lighting that would not substantially differ from the current lighting located at the Project site. Therefore, upon completion of construction, there would be less than significant impacts to lighting or glare that would adversely affect day or nighttime views of the area. The EIR will further evaluate potential impacts from light or glare that may result from construction of the Project.

2.4.2 Agricultural and Forestry Resources

Table 2-3. Agricultural and Forestry Resources Checklist

| II. AGRICULTURAL AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|---------------------------------------|-------------------------------------|------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use | | | X |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | X | | |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Protection (as defined by Government Code section 51104(g)? | X | | |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | X | | |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? | X | | |

Environmental Setting

The Project is located in the sphere of influence of unincorporated Santa Clara County. A majority of the area surrounding Pacheco Reservoir is rural, pastoral landscape of open space. Predominant vegetation communities include oak woodland, with smaller areas of annual grassland, mixed chaparral, valley foothill riparian, and sycamore alluvial woodland. The land surrounding Pacheco Reservoir is privately owned and primarily used for ranching and grazing.

Explanations for II. Agricultural and Forestry Resources

- a) **No Impact.** The majority of the Project area is located on lands designated as Grazing Land by the Farmland Mapping and Monitoring Program. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Project area. Therefore, there is no impact and the EIR will not evaluate the impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

- b) **Potentially Significant Impact.** Project construction would convert agricultural rangeland to nonagricultural uses and require cancellation of lands under Williamson Act contracts. Sections of land would be temporarily converted into staging areas for construction equipment and construction activities, and may disturb existing grazing

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activities. Upon completion of construction activities, the staging areas would be returned to pre-Project conditions and could be used as grazing land. However, the expanded reservoir would increase the inundated area by 1,245 acres, permanently converting some land to non-agricultural use. The new access road and other Project facilities would also permanently convert land to non-agricultural use. Therefore, the proposed Project will both temporarily and permanently conflict with existing zoning for agricultural use and the impact is considered potentially significant. The EIR will further evaluate potential impacts to Williamson Act contracts and land zoned for agricultural use that may result from construction of the Project.

- c) Potentially Significant Impact.** There are no timberland or timberland that is zoned Timberland Protection in the Project area. The area surrounding Pacheco Reservoir is zoned as ranchlands that support a special resource, designated as oak woodlands. This area can be defined as forest land because oak woodlands encompass 10 percent or greater of the canopy coverage. Portions of this land will be inundated by the expanded reservoir, and may be impacted by the construction of the new access, haul road and other Project facilities, resulting in both temporary and permanent impacts to land zoned as forest land. Therefore, the impact is considered potentially significant (County of Santa Clara 2011, Jones-Stokes 2003). The EIR will further evaluate potential impacts to land zoned for forest land that may result from construction of the Project.
- d) Potentially Significant Impact.** As described above, the area surrounding Pacheco Reservoir can be defined as forest land because oak woodlands encompass 10 percent or greater of the canopy coverage. Construction activities may result in the loss of forest land, and some forest land would temporarily be converted to non-forest uses for construction equipment staging areas. In addition, the expanded reservoir would increase the inundated area by 1,245 acres, permanently converting forest land to non-forest use. The new access road and other Project facilities would also permanently convert small parcels of land surrounding the reservoir. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts to forest land that may result from construction of the Project.
- e) Potentially Significant Impact.** As stated above, the Project could permanently convert forest land to non-forest use through the construction of the access road and haul road, and preparation of the borrow areas. Forest land may also be temporarily converted to staging areas for construction equipment. In addition, the Project has the potential to diminish agricultural land resource quality and importance because of altered and/or soil saturation. At some locations, flows from Pacheco Creek or the Pajaro River could change the duration and seasonality of inundation, or soil saturation, which could potentially affect crop production. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts to crop production downstream of the expanded Pacheco Reservoir resulting from Project operations.

2.4.3 Air Quality

Table 2-4. Air Quality Checklist

| III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Conflict with or obstruct implementation of applicable air quality plans? | X | | |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | X | | |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | X | | |
| d) Expose sensitive receptors to substantial pollutant concentrations? | | X | |
| e) Create objectionable odors affecting a substantial number of people? | | X | |

Environmental Setting

Particulate matter (PM) can damage human health and retard plant growth. PM also reduces visibility, soils buildings and materials, and causes corrosion. Health concerns associated with suspended PM focus on particles small enough to be drawn into the lungs when inhaled, generally those with a diameter of 10 microns or less (PM₁₀). Current air quality regulations recognize an additional subcategory of fine particulates with a diameter of 2.5 microns or less (PM_{2.5}).

The proposed Project is located within the Santa Clara Valley subregion of the Bay Area Air Quality Management District (BAAQMD). According to BAAQMD, major air pollutant of concerns in the Santa Clara Valley include ozone and PM_{2.5}. Due to high population density, wood smoke, traffic, and poor wintertime circulation, the Santa Clara Valley experiences many exceedences of the PM_{2.5} standard each winter.

The BAAQMD region is designated nonattainment for the National Ambient Air Quality Standards (NAAQS) for ozone and PM_{2.5}, and the State Ambient Air Quality Standards (SAAQS) for ozone, particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}). The region is designated either attainment or unclassifiable for the remaining NAAQS and SAAQS (Bay Area Air Quality Management District 2017a).

The BAAQMD established thresholds of significance for both construction and operation of projects within their boundaries. These thresholds are contained in the BAAQMD CEQA Guidelines, issued in 1999. Although the BAAQMD issued revised thresholds and guidance in June 2010, they were subsequently challenged and set aside by the Alameda County Superior Court because they were not subjected to a CEQA evaluation prior to adoption. Regardless of this fact, SCVWD has adopted the 2010 BAAQMD thresholds for the purposes of this analysis because they were established based on substantial evidence and represent the most current and appropriate thresholds for use at this time.

For short-term construction-related emissions, quantification is not necessary and projects are assumed to be below the significance thresholds if they implement a set of basic mitigation

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measures and, for larger projects such as the proposed Project, a set of enhanced mitigation measures. For long-term maintenance and operational emissions, the threshold of significance for carbon monoxide (CO) would be a contribution causing an exceedence of the SAAQS of 0 parts per million, averaged over eight hours, or 20 parts per million averaged over one hour. The long-term operational threshold of significance for reactive organic gases (ROG), nitrogen oxides (NO_x), and PM_{2.5} (exhaust) is 54 pounds per day; 82 pounds per day of PM₁₀ (exhaust); and zero pounds per day of local CO, accidental release of acutely hazardous air pollutants, or odors (BAAQMD 2017b).

The BAAQMD CEQA Guidelines provide that PM₁₀ and PM_{2.5} (fugitive dust) should be managed by best management practices (BMP).

Explanations for III. Air Quality

- a) Potentially Significant Impact.** Project construction activities have the potential to generate emissions from heavy equipment used during construction, as well as the generation of dust. Likely air pollutants from construction include the following: PM dust, criteria pollutants from fuel combustion, and diesel PM. Emissions generated during implementation of the proposed Project could potentially conflict with, or obstruct, implementation of the BAAQMD air quality plan. Therefore, the impact is considered potentially significant. In accordance with BAAQMD regulations, this issue will be evaluated further in the EIR. SCVWD will conduct an air quality analysis of the proposed Project to estimate and evaluate potential emissions produced by the construction and operation of the Project. Results will be compared to numeric significance thresholds. The EIR will further evaluate potential impacts to air quality that may result from construction and operation of the Project and would conflict or obstruct implementation of applicable air quality plans.
- b) Potentially Significant Impact.** As described above, Project construction activities have the potential to generate temporary impacts to air quality, resulting from emissions from heavy equipment used during construction. Although the construction activities would be short-term and temporary, they would have the potential to exceed thresholds of significance unless the basic and enhanced mitigation measures are incorporated into construction activities. Long-term maintenance and operation of the Project would not likely exceed the significance threshold for daily or annual emissions for ROG, NO_x, and PM₁₀. However, due to temporary emissions from construction activities, the impact is considered potentially significant. The air quality analysis conducted for the EIR would evaluate both the short-term construction and long-term operation emissions, and compare these against numeric significance thresholds. The EIR will further evaluate potential impacts to air quality that may result from construction of the Project.
- c) Potentially Significant Impact.** This issue will be evaluated further in the EIR based on the emissions analysis and results comparison to numeric significance thresholds. Due to potential emissions from Project construction activities, the impact is considered potentially significant. The EIR will further evaluate potential impacts that may result from construction the Project to criteria pollutants for which the Project region is in non-attainment.

- d) Less than Significant Impact.** Sensitive receptors within the Project area include two single family residences located approximately 1,000 feet south of the existing North Fork Dam. Construction of the Project would have the potential to expose these sensitive receptors to substantial pollutant concentrations from heavy equipment emissions and the generation of dust. However, construction-related pollutant concentrations, emissions and dust would not persist upon completion of construction. The potential for exposure to airborne pollutants will be evaluated further in the EIR. The EIR will also further evaluate potential impacts to sensitive receptors that may result from construction the Project.
- e) Less than Significant Impact.** Construction of the proposed Project could create objectionable odors. Construction equipment may produce diesel emissions, which could be smelled by the two single-family residences south of the North Fork Dam. However, construction-related odors would not persist upon completion of construction. The dewatering of the existing reservoir could create an objectionable odor associated with decomposing organic matter in the reservoir. However, existing operations of Pacheco Reservoir cause the reservoir to periodically go dry. Therefore, any objectionable odor caused by dewatering of the reservoir is not anticipated to be beyond existing conditions and thus the impact is considering less than significant. The EIR will further evaluate potential impacts from objectionable odors that may result from construction of the Project.

2.4.4 Biological Resources

Table 2-5. Biological Resources Checklist

| IV. BIOLOGICAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Marine Fisheries Service? | X | | |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Marine Fisheries Service? | X | | |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | X | | |
| d) Interfere substantially with the movement of any native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | X | | |

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| IV. BIOLOGICAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | X | | |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | X | |

Environmental Setting

Plants and Wildlife. The area surrounding Pacheco Reservoir is primarily undeveloped grazing land. Oak woodland comprises the majority of land cover in the vicinity of the existing reservoir, including: foothill-pine oak woodland, mixed oak woodland and forest, blue oak woodland, and valley oak woodland (County of Santa Clara 2012). Other cover types in the area include northern riparian forest and woodland, California annual grassland, and chaparral (mixed serpentine chaparral and northern mixed chaparral / chamise chaparral) (County of Santa Clara 2012).

CDFW considers mixed serpentine chaparral to be a sensitive biotic community. Relatively small areas of serpentine soils are mapped on the east side of Pacheco Reservoir, including within the proposed expanded reservoir area (County of Santa Clara 2012). Serpentine soils form from weathering of ultramafic rock containing serpentine, which results in areas of shallow, nutrient-poor, high magnesium soils that may contain levels of heavy metals (chromium and nickel) toxic to many plant species. Plants adapted to survive in these soils often occur only in limited areas, and many are special-status species. Mixed serpentine chaparral is typically more open than other chaparral types, with shrubs that are fire-adapted and tend to be shorter and have reduced, curled, or thickened leaves.

Plant species in mixed serpentine chaparral may include *Calistoga navarretia* (*Navarretia heterodoxa*), Santa Clara Valley dudleya (*Dudleya abramsii* spp. *setchellii*), Mt. Hamilton thistle (*Cirsium fontinale* var. *campylon*), smooth lessingia (*Lessingia microdemia* var. *glabrata*), and Tiberon Indian paintbrush (*Castilleja affinis* spp. *neglecta*), coyote ceanothus (*Ceanothus ferrisiae*), Loma Prieta hoita (*Hoita strobiliana*), and most beautiful jewel-flower (*Streptanthus albidus* ssp. *peramoenus*). Sensitive wildlife species, including California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), and western pond turtle (*Clemmys marmorata*), may use mixed serpentine chaparral habitat areas for movement, aestivation, or foraging habitat. Bay checkerspot butterfly (*Euphydras editha bayensis*) may move through this community type (County of Santa Clara 2012).

Sycamore alluvial woodland, also considered a sensitive biotic community by CDFW, occurs along Pacheco Creek below Pacheco Reservoir and on the North Fork of Pacheco Creek upstream of the proposed expanded reservoir. In 1992, CDFW mapped 135 acres of sycamore alluvial woodland on Pacheco Creek along SR 152, which comprised more than 5 percent of the known extent of this habitat type in the state (County of Santa Clara 2012).

Currently, water is conveyed from Pacheco Reservoir to the North Fork of Pacheco Creek. The existing dam spillway pool is a deep pool that conveys water into the North Fork Pacheco Creek. The North Fork of Pacheco Creek flows downstream from the pool into a moderately incised stream channel with good shade cover to the confluence with the South Fork of Pacheco Creek just upstream from SR 152. The mainstem reach of Pacheco Creek between confluence with the South Fork of Pacheco Creek and Casa de Fruta supports a broad, relatively undisturbed floodplain with valley foothill riparian vegetation. However, grazing has reduced riparian vegetation along the stream channel, resulting in high summer stream temperatures downstream from SR 152.

Numerous amphibian, reptile, bird, and mammal wildlife species use riparian habitats. Sensitive species such as Bay checkerspot butterfly, California tiger salamander, California red-legged frog, foothill yellow-legged frog (*Rana boylei*), western pond turtle, least Bell's vireo (*Vireo bellii psuillus*), tricolored blackbird (*Agelaius tricolor*), and San Joaquin kit fox (*Vulpes macrotis mutica*) use riparian habitat for movement, breeding, foraging, and/or refugia. California red-legged frog and western pond turtle may occur in sycamore alluvial woodland year-round.

Special-status Plants. There are no known occurrences of special-status plants in the vicinity of the Project. The special-status rock sanicle (*Sanicula saxatilis*) is known to occur at Henry W. Coe State Park. Rock sanicle is a low stout perennial herb in the carrot family. This plant species is designated as a state rare species, and has no federal special status. Other special-status species have potential to occur within the Project area, but no comprehensive surveys have been performed to date.

Special-status wildlife. Current federally and State listed special-status wildlife species that have been reported in the vicinity of Pacheco Reservoir include: California tiger salamander (federally and state listed as Threatened) and California red-legged frog (federally listed as Threatened) (California Department of Fish and Wildlife 2017). Other special-status species, such as San Joaquin kit fox, least Bell's vireo, foothill yellow-legged frog, and northwestern pond turtle are reported or suspected to occur in the area. As stated above, habitat types that may support other special-status species occur in the vicinity of the Project; therefore, special-status species that have not been previously reported may occur in the area. The EIR will further evaluate the potential presence of special-status plant and animal species in the Project area.

Impacts on individuals or habitat for special-status wildlife would require incidental take authorization from the USFWS and CDFW. Coverage for terrestrial species may also be obtained through the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (VHP). The Project is not a covered activity in the VHP; however, it could be added through a special major amendment procedure and conservation strategy for terrestrial covered species (County of Santa Clara 2012).

Fisheries. NMFS included the Pajaro River and Pacheco Creek in the Recovery Plan for SCCC steelhead Distinct Population Segment (DPS) (National Marine Fisheries Service 2013). In the Recovery Plan, NMFS states the critical recovery action is to ensure that the pattern and magnitude of water releases from North Fork Dam provides the essential habitat functions to support the life history and habitat requirements of both adult and juvenile life stages. The SCCC steelhead were listed by NMFS as threatened, first in 1998, and was reaffirmed in a second listing in 2005. If implemented, the Project will require Endangered Species Act (ESA)

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consultation with NMFS and may require an incidental take permit from NMFS for SCCC steelhead.

Pacheco Creek. Pacheco Creek, downstream of Pacheco Reservoir, periodically supports SCCC steelhead (*Oncorhynchus mykiss*). Passage for adult and smolt steelhead is restricted in dry years; however, rearing habitat can be good in years with average and above average precipitation if Pacheco Reservoir is operated in consideration of fishery needs. In some years, the Reservoir releases are delayed until June which can cause low-flow/warm water conditions in May and associated increase in juvenile steelhead mortality. During wetter years, releases in the summer generally provide suitable flows and temperatures for rearing of steelhead. Rearing habitat is considered best closer to the dam. However, as water temperatures rise and stream flows decrease downstream from the dam, habitat quality decreases with distance from the dam.

Sacramento suckers (*Catostomas occidentalis*), hitch (*Lavinia exilicauda*), and prickly sculpin (*Cottus asper*)—all native species—have been observed in Pacheco Creek. Non-native fishes observed in Pacheco Creek—as well as ponds along Pacheco Creek, which are, at times, connected to Pacheco Creek—include largemouth bass (*Micropterus salmoides*), goldfish (*Carrasius auratus*), and common carp (*Cyprinus carpio*) (Smith pers. comm. 2017).

Pajaro River. The Pajaro River is a pathway for adult SCCC steelhead as they migrate to their upstream spawning habitat, and as juveniles migrate downstream to the ocean. The Pajaro River itself does not generally provide suitable spawning or rearing conditions for steelhead because of high summer water temperatures, low summer stream flows, and sand/silt substrate. Populations declined following the 1976-1977 and 1987-1991 droughts, which had flows that impeded fish passage. Subsequent wet years likely had increased fish numbers. The population size of steelhead using the Pajaro River is unknown.

Critical Habitat and Essential Fish Habitat. Critical habitat is present in the Project area. Critical habitat for the SCCC steelhead DPS was designated on September 2, 2005 (70 FR 52488 52630). Pacheco Creek is included in the critical habitat designation.

Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Neither the Pajaro River nor Pacheco Creek are designated EFH for Pacific salmon, which includes all species of salmon, but does not include steelhead.

Wetlands. Wetland habitat provides breeding habitat for birds and amphibians; mammals, such as the ringtail may occur at the edge of this habitat. One large patch of fresh emergent wetland is located along the floodplain immediately above the confluence of the North and East Forks of Pacheco Creek. The Pacheco Peak U.S. Geological Survey (USGS) quadrangle map shows a spring in the vicinity of this wetland; this spring may provide additional input to the wetland. Several freshwater emergent wetlands and freshwater forested/shrub wetlands are mapped by the National Wetlands Inventory on the margins of Pacheco Reservoir and its tributaries (United States Fish and Wildlife 2017). There may be more wetland habitat in the vicinity of the Project. Ponds occur throughout the area, with high density reported in the vicinity of the reservoir (County of Santa Clara 2012). Ponds can be important habitat for species such as California tiger salamander, California red-legged frog, western pond turtle, and tricolored blackbird during

much of their life cycles (County of Santa Clara 2012). The EIR process will require more detailed wetland mapping and assessment.

San Joaquin River Watershed, As part of the Project, SCVWD will, in below normal water years, provide up to 2,000 AF of water to the eight wildlife refuges in the San Joaquin River Basin of the Delta watershed that receive Incremental Level 4 water supplies. Incremental Level 4 is defined as the difference between historic annual average water deliveries (Level 2) and water supplies needed to achieve optimal waterfowl habitat management (Level 4).

Explanations for IV. Biological Resources

- a) **Potentially Significant Impact.** The reservoir locations (existing and proposed) support habitat for several special status plant and wildlife species.

Fisheries Overview. No special-status fish species occur in or upstream from the existing Pacheco Reservoir. However, federally threatened SCCC steelhead are periodically present in Pacheco Creek, migrating through the Pajaro River into Pacheco Creek when flows are contiguous and water temperatures are not above suitable conditions for each life stage. Through improved flow and temperature conditions, the Project is expected to provide substantive beneficial improvements in the SCCC steelhead habitat conditions in Pacheco Creek through improved flow and temperature conditions.

Temporary Impacts to Fisheries in the Pacheco Creek and Pajaro River Watersheds. Potential increases in sedimentation and turbidity—resulting from increased runoff and potential hazardous materials spills associated with construction of the Project—could result in impacts on Pacheco Creek downstream of the existing North Fork Dam and the new dam; however, SCCC steelhead do not regularly occur in Pacheco Creek, so they may not be affected by construction-related effects.

Permanent Impacts to Fisheries in the Pacheco Creek and Pajaro River Watersheds. Implementation of the proposed Project is expected to result in permanent benefits to SCCC steelhead in Pacheco Creek and the Pajaro River because the Project would result in cooler water and improved flows in Pacheco Creek. Additional new habitat between the new dam and footprint of the existing North Fork Dam will be opened up to SCCC steelhead. Improvements in habitat conditions for SCCC steelhead in Pacheco Creek have been evaluated through the use of the Pacheco Creek Steelhead Habitat Suitability Model. The Pacheco Creek Steelhead Habitat Suitability Model was developed through grant funding provided by the Fisheries Restoration Grant Program, including contributing partner CDFW. An output of the Pacheco Creek Steelhead Habitat Suitability Model is a steelhead cohort score. The steelhead cohort score provides an index of the ability of Pacheco Creek to support SCCC steelhead through all life stages, based on the 15-month period in which a cohort is expected to remain in the creek (i.e., from adult migration through juvenile outmigration). Based on modeling results, the Project could significantly improve the viability of SCCC steelhead populations through improved habitat conditions in Pacheco Creek in all year types (i.e., critical, dry, below normal, above normal, wet) with a long-term average increase of 158 percent over without-Project conditions (2017).

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If implemented, Project construction and operations could introduce nonnative aquatic species to Pacheco Reservoir, Pacheco Creek, and the Pajaro River. Changes in flow regime may alter the available prey base, and may result in increased interspecific (between species) and intraspecific (within a species) competition for suitable rearing feeding, spawning, and refuge habitats. Project operations could result in alterations to the channels of Pacheco Creek and the Pajaro River. As a result, fish in Pacheco Creek and the Pajaro River could be subject to potential effects related to geomorphic processes. Short-term impacts could include temporary habitat loss and displacement of representative fish species as the Creek or River channels adjust to the new operations at Pacheco Reservoir.

Impacts to Special-status Plant and Wildlife Species in the Pacheco Creek and Pajaro River Watersheds. Activities associated with the proposed Project, including inundation of the expanded reservoir, could adversely affect special-status species individuals and/or their habitats. Project activities could also directly injure or kill special-status species as a result of crushing or trampling by construction equipment. In addition, habitats for special-status species may be temporarily or permanently lost as a result of Project activities. Project activities that occur in close proximity to occupied special-status species habitats (e.g., occupied nests, roosts, or burrows) could indirectly disturb individuals to the point where they abandon those habitats. If populations of these species and suitable habitat are limited locally and regionally, these impacts would be potentially significant.

Permanent Benefits for Special-status Plant and Wildlife Species in the San Joaquin River Watershed. Water supplied to the Incremental Level 4 wildlife refuges is expected to help support special-status plant and wildlife species in the San Joaquin River watershed by increasing wetland habitat in spring and early summer. Water supply is especially scarce during these times. Species beneficially affected may include: threatened giant garter snake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), California red-legged frog (*Rana aurora draytonii*), California tiger salamander (*Ambystoma californiense*), western spadefoot toad (*Spea [Scaphiopus] hammondi*), Native western toads (*Bufo boreas*), and Sierran treefrogs (*Pseudacris sierra*) (CDFW 1994).

Summary. The EIR will further evaluate the potential presence of and magnitude of Project impacts on special-status plant and wildlife species. This evaluation will be based on Project-specific design and construction details to be developed during the EIR process. If the VHP is amended to include coverage of this Project, conditions will be specified under the VHP to address potential impacts to special-status plant and wildlife species. If the VHP is not amended, incidental take for special status species must be obtained through section 7 consultation or section 10 of the ESA with applicable agencies. Measures to avoid, minimize, and/or compensate for impacts to special-status wildlife and plant species would be implemented by the Project in conformance with the federal Endangered Species Act and the California Endangered Species Act (through the VHP or other processes), National Environmental Policy Act (NEPA)/CEQA requirements, and permit conditions.

- b) Potentially Significant Impact.** Ecologically important riparian habitat, regulated by CDFW under Section 1600 of the California Fish and Game Code, occurs within the Project site, and other sensitive natural communities designated by CDFW are known to be present near the Project site (sycamore alluvial woodland and mixed serpentine chaparral). CDFW is expected to take jurisdiction over riparian habitat associated with Pacheco Creek, Pacheco Reservoir, and their tributaries.

Impacts in the Pacheco Creek and Pajaro River Watersheds. Project construction activities, such as excavation and fill, could result in the temporary disturbance and permanent loss of riparian habitat and other sensitive natural communities. Project operations, including inundation, is anticipated to result in permanent loss of riparian habitat. This impact is considered potentially significant because it could result in temporary degradation and permanent losses of these communities and habitats.

Changes in hydrology in Pacheco Creek and the Pajaro River downstream of the expanded reservoir could impact riparian habitat adjacent to these water bodies, including areas of sycamore alluvial woodland. Flooding is an important ecological function in riparian areas that introduces minerals and organic matter in soils and allows for seed dispersal and regeneration of species such as California sycamore, white alder, and black willow (County of Santa Clara 2012). The potential for greater flows downstream of the reservoir during the growing season could result in beneficial effects on riparian habitats.

Impacts in the San Joaquin River Watershed. As described above, the Incremental Level 4 wildlife refuges in the San Joaquin River Watershed provide important habitat to a number of migratory waterfowl, amphibian, and reptilian species. The provision of water to the wildlife refuges in below normal water years could support riparian and wetland habitats in the San Joaquin River watershed. Therefore, potential impacts to riparian habitat in the San Joaquin River watershed are considered beneficial.

The EIR will further evaluate this impact based on additional mapping of riparian habitat and other sensitive natural communities and an analysis of the potential for construction activities to impact riparian habitat and special status natural communities based on Project-specific design, construction, and operations details to be developed during the EIR process.

- c) Potentially Significant Impact.** Wetlands and other waters of the U.S. are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Waters of the state are protected by the Regional Water Quality Control Board (RWQCB), under the Porter-Cologne Water Quality Control Act, and impacts to the beds and banks of streams, lakes, and ponds are regulated by the CDFW under Section 1600 of the California Fish and Game Code. The entire reservoir, up to the elevation of the spillway crest, is expected to be considered jurisdictional waters of the U.S. by the USACE and waters of the state by the RWQCB. The National Wetlands Inventory maps wetlands adjacent to the reservoir, and other unmapped wetlands are likely to be present in the vicinity of the reservoir.

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The majority of the jurisdictional areas within the reservoir are non-vegetated “other waters.” A formal jurisdictional delineation of the Project site will be conducted as part of the EIR process for the proposed Project.

Temporary and Permanent Impacts in the Pacheco Creek and Pajaro River Watersheds. Activities associated with the proposed Project could result in temporary and permanent disturbance of jurisdictional wetland and aquatic communities, which provide habitat for fish and wildlife. Project activities could result in the placement of fill, hydrological interruption (e.g., dewatering or diversion), alteration of bed and bank, degradation of water quality (e.g., increased sedimentation and turbidity), and other direct impacts. The activities would primarily result in the temporary loss and disturbance of wetlands and aquatic habitats.

Impacts to wetlands and other waters are considered significant because they would result in temporary degradation and limited permanent losses of ecologically valuable wetlands and aquatic habitats—including jurisdictional wetlands and other waters—and temporary disruption of stream continuity during Project activities within the Pacheco Creek channel.

Impacts in the San Joaquin River Watershed. The Project’s dedication of firm water supplies to Incremental Level 4 wildlife refuges in the San Joaquin River watershed could provide up to 1,000 acres of wetland habitat during periods where pressure on available habitat is significant. Therefore, potential impacts on protected wetlands in the San Joaquin River watershed are considered beneficial.

The EIR will further evaluate the magnitude of impacts of construction activities and Project operations on wetlands and waters. This evaluation will be based on Project-specific design and construction details to be developed during the EIR process.

d) Potentially Significant Impact.

Fisheries. The construction of the Project could temporarily disrupt the movement of fish species in Pacheco Reservoir and in Pacheco Creek downstream of both the existing North Fork Dam and the proposed new dam.

Pacheco Reservoir. The Reservoir drawdown would result in dewatering, and would result in fish losses except for any fish able to swim into creeks still flowing into the reservoir bed. The combined reduction in habitat availability and water quality with the dewatered reservoir would result in a negative impact on the reservoir fishery, including any native resident fish that may reside in the reservoir.

Pacheco Creek Downstream of Pacheco Dam. Reduced water quality, discharged from the reservoir as a result of dewatering, has the potential for adverse impacts on fish in Pacheco Creek. A dewatering plan will be developed, and is subject to approval from regulatory agencies. Additionally, discharges from Project construction activities such as tunneling, could contain elevated levels of turbidity.

The stream channel, within the footprint of the existing reservoir, will be restored between the new dam and the existing dam (which will be removed). The channel will be designed to reduce streambank erosion (e.g., using bank stabilizing materials), and riparian vegetation will be planted to initiate growth of a new riparian forest along the new channel. Where feasible, mitigation measures will be prescribed to reduce impacts to less than significant levels.

Wildlife Movement Corridors and Native Wildlife Nursery Sites in the Pacheco Creek and the Pajaro River Watersheds. Within the Project site, natural habitats (e.g., riparian, oak woodlands, chaparral), streams (e.g., Pacheco Creek and its tributaries), and the shorelines of Pacheco Reservoir may function as pathways for terrestrial wildlife movement. Additionally, the Project area provides nesting site for migratory birds and raptors. Project activities are expected to cause both temporary and permanent impacts to wildlife movement in these areas.

Temporary dewatering of Pacheco Reservoir would result in both beneficial and negative effects for terrestrial wildlife movement. Because more upland habitat would be available for use by these species, mammals may more easily cross the reservoir area in a dewatered condition. However, because terrestrial wildlife may have to travel longer distances to water, predation risk may increase. These effects would also apply to other dispersing or migrating wildlife species, such as reptiles and amphibians. Noise and disturbance associated with construction activities could cause species that commonly use habitats in the Project vicinity to disperse to at least temporarily avoid disturbances through the Project area. After construction activities are complete, the expanded reservoir would create a larger permanent barrier to animal movement through the area than the existing reservoir. It would also inundate land that was previous used for wildlife movement.

Impacts in the San Joaquin River Watershed. The Project's dedication of firm water supplies to Incremental Level 4 wildlife refuges in the San Joaquin River watershed could provide for waterfowl habitat optimization. This could include spring and early-summer irrigation of wetlands for forage-crop production and habitat for waterfowl and other non-migratory avian species. Therefore, potential impacts to migratory species in the San Joaquin River watershed are considered beneficial.

The EIR will further evaluate the magnitude of impacts of construction activities and Project operations on the movement of native wildlife species or established wildlife corridors and wildlife nursery sites. This evaluation will be based on Project-specific design and construction details and consideration of the various types of species that currently move through and use the Project site.

- e) **Potentially Significant Impact.** Project construction activities will be limited to the area around Pacheco Reservoir, located in unincorporated Santa Clara County, and Pacheco Pumping Plant near San Luis Reservoir, located in unincorporated Merced County. The County of Santa Clara Tree Preservation and Removal Ordinance (County Code, Section C16.1 to C16.17) serves to protect all trees having a trunk that measures 95.8 centimeters (37.7 inches) or more in circumference, or a diameter of 30 centimeters (12 inches), at a height of 1.4 meters (4.5 feet) above the ground or immediately below the

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lowest branch, whichever is lower. In the case of multi-trunk trees, a trunk size of 191.5 centimeters (75.4 inches) in circumference, or a diameter of 70 centimeters (24 inches), is protected by the code. In addition, any tree that, because of its history, girth, height, species, or other unique quality is considered significant to the community or recommended by the historic commission can be designated as a heritage tree to be protected and served. Ordinance trees are defined based on the applicable local ordinance (i.e., County of Santa Clara Tree Preservation and Removal Ordinance), unless an agreement between SCVWD and a municipality states otherwise.

Ordinance-sized trees occur on the Project site in upland areas (e.g., oak woodlands) and within the riparian habitats along Pacheco Creek, where tree removal would be necessary to construct the new dam or would be inundated during Project operations. Therefore, Project activities would likely result in the permanent loss of ordinance-sized trees.

The 2030 Merced County General Plan (2013) identifies the development of an Oak Woodland Ordinance as a policy for the protection of biological resources. However, at this time, no such policy has been adopted by Merced County. If a policy is adopted prior to Project construction, SCVWD will follow all applicable local regulations and guidelines related to the removal of trees near Pacheco Pumping Plant.

This impact is considered potentially significant because it could result in permanent loss of ecologically valuable trees. The EIR will further evaluate this impact, based on the mapping of ordinance-sized trees and an analysis of the potential for construction activities to impact ordinance-sized trees, based on Project-specific design and construction details to be developed during the EIR process.

- f) **Less than Significant Impact.** No other habitat conservation plans (HCP) have been approved, or are in preparation, for the Project site, and aside from the VHP, no other Natural Community Conservation Plans (NCCP) in Santa Clara County have been approved or are in preparation (CDFW 2016). If the VHP is amended to include expansion of Pacheco Reservoir, the proposed Project will comply with the conditions of the VHP. If the VHP is not amended to include the proposed Project, federal Endangered Species Act and California Endangered Species Act consultation and compliance would be addressed through a separate mechanism and would not impact the existing HCP. Therefore, the proposed Project would not conflict with the VHP or any other adopted HCPs or NCCPs, or with any other approved local, regional, or state HCPs, and thus the impact associated with conflicts between the Project and any adopted HCP or NCCP would be less than significant. The EIR will further evaluate whether potential impacts that may result from the Project would conflict with the provisions of any HCP or NCCP.

2.4.5 Cultural Resources

Table 2-6. Cultural Resources Checklist

| V. CULTURAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|--------------------------------|------------------------------|-----------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | X | | |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | X | | |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | X | |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | X | | |

Environmental Setting

The Project is located in the southeast portion of Santa Clara Valley along Pacheco Creek. Archaeological evidence for the South Santa Clara Valley suggests that it has been inhabited for at least 4,200 years (Santa Clara Valley Water District 2008). Until about 2,500 years ago, populations were non-permanent, and seasonally moved out of the South Santa Clara Valley to take advantage of resources in coastal and inland California (Santa Clara Valley Water District 2008). Pacheco Pass was used as a passage to the coast, primarily by the Costanoan Indians, of Ohlone.

A significant portion of archaeological resources may lie buried beneath the alluvial fans and floodplains that form the valley floors of the Project area. Although such buried resources cannot be detected during a traditional archaeological surface survey, it is possible to distinguish which areas of the modern landscape have potential for buried resources and which landforms are either too old to contain such archaeological remains or which were formed by processes that are unlikely to have preserved intact cultural remains.

Explanations for V. Cultural Resources

- a) Potentially Significant Impact.** There is the potential that historic resources could be located in the Project area. The exact age and potential historic significance of structures in the project area is unknown. Project construction activities and the inundation of an expanded Pacheco Reservoir could damage or destroy such resources. SCVWD will conduct further surveys as part of the EIR to determine the eligibility of the structures in the Project area as historic resources. The impact to historical resources is considered potentially significant. The EIR will further evaluate potential impacts to historical resources that may result from construction of the Project.
- b) Potentially Significant Impact.** The inundation of an expanded Pacheco Reservoir would likely destroy numerous, significant archaeological resources. The proposed Project will require investigation of an archaeological Area of Potential Effect, to accommodate construction needs to incorporate borrow, staging, and spoil disposal areas and the increased reservoir inundation area. While most of these areas may have been subject to prior impacts, those locations with potentially intact soils will require study. If cultural resources are identified in the Project area and cannot be avoided by

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the Project, then they must be evaluated for listing on the National Register of Historic Places. If an eligible property cannot be avoided, then impacts to the resource must be mitigated. Such mitigation would likely consist of data recovery excavations. The impact to archaeological resources is considered potentially significant. The EIR will further evaluate potential impacts to archaeological resources that may result from construction of the Project.

c) Less Than Significant Impact.

Paleontological Resources. Activities that cause surface disturbance in areas not previously subject to disturbance, have the potential to uncover paleontological resources (similar to the activities described above that could affect archaeological resources). Construction activities and exploratory work all have some potential to unearth paleontological resources.

It appears that greywacke and mélange units of the Franciscan Assemblage, typical of the Yolly Bolly Terrain (Wentworth 1999), underlie the entire potential reservoir site (Dibblee 2007). All components of the proposed Project would be constructed on Franciscan Complex substrate, locally overlain by a thin veneer of Quaternary materials, principally active alluvium and colluvium. Given the deep-water sedimentary depositional and tectonic environments represented by the Franciscan Complex, fossil preservation is poor (Hanson 2004). Radiolarian cherts are present in the vicinity of the reservoir, but no megafossils are known (Wentworth 1999).

Overall, the paleontological sensitivity of the Franciscan Complex in the Project area is low; therefore, the Project area is considered unlikely to contain significant paleontological resources. The impact is considered less than significant.

Unique Geologic Formations. Geologic formations, and in this case assemblage (being a tectonic rather than time-lithostratigraphic deposit) their structure and the rocks in them provide information about past geologic conditions. Therefore, rocks may be of scientific, educational, or recreational value. For these reasons, typical adverse impacts to unique geologic features include material impairment through destruction, permanent covering, or alteration.

The geologic assemblage units that occur in the vicinity of the Project site are not exclusive locally or regionally, and they are not representative of a type locality of a geologic deposit. The Project, as designed, would not materially impair a unique geologic feature by destroying or altering those physical characteristics that convey the uniqueness of the resource. Therefore, the impact to unique geologic formations is considered less than significant.

The EIR will further evaluate potential impacts to unique paleontological resources or unique geologic features that may result from construction of the Project.

d) Potentially Significant Impact. There are no known burial locations within the Project area. Nonetheless, there is a potential to unearth previously unidentified human remains during ground disturbing activities. In the unlikely event that human remains are

encountered during Project construction activities, work shall halt in the immediate vicinity in accord with the State Health and Safety Code Section 7050.5. Along with notifying the Project archaeologist, the County coroner must also promptly be contacted to determine the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. If the human remains are determined to be prehistoric Native American, the coroner will notify the Native American Heritage Commission (NAHC) within 24 hours. The commission will assign and contact the Most Likely Descendant who will be responsible for making recommendations concerning the disposition of the remains. The archaeologist will assist with compliance of the Native American Graves Protection and Repatriation Act. The impact is considered potentially significant. The EIR will further evaluate potential for the disturbance of human remains that may result from construction of the Project.

2.4.6 Geology and Soils

Table 2-7. Geology and Soils Checklist

| VI. GEOLOGY AND SOILS: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death related to: | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | X |
| ii) Strong seismic ground shaking? | X | | |
| iii) Seismic-related ground failure, including liquefaction? | | X | |
| iv) Landslides? | X | | |
| b) Result in substantial soil erosion or the loss of topsoil? | X | | |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | X | |
| d) Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | X | |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater? | | | X |

Environmental Setting

The Project site is located within the Diablo Range portion of the Coast Ranges Geomorphic Province. This province is characterized by northwest-trending mountain ranges and valleys bordered on the west by the Pacific Ocean and on the east by the Great Valley Geomorphic Province. The Diablo Range is a broad anticlinorium with a core comprised largely of Franciscan Assemblage subduction sequence sedimentary rocks that have been folded, sheared and mildly metamorphosed. The overall fabric of the Coast Ranges is a reflection of the

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greater San Andreas fault system, a complex system of primarily northwest-trending, right lateral, strike-slip faults.

Explanations for VI. Geology and Soils

- a) i) **No Impact.** While the Franciscan Assemblage is commonly much fractured and internally sheared, there are no known active or significant inactive faults in proximity to the proposed Project site capable of ground surface rupture. Therefore, there is no impact and the EIR will not evaluate the potential for the Project to expose people or structures to a known earthquake fault.
- a) ii) **Potentially Significant Impact.** Strong ground shaking in the Project area can be expected over the life of the Project from any of several active faults in the region. Active faults of the San Andreas system closest to the project area and capable of producing strong ground shaking include the San Andreas (approximately 20 miles southwest), Sargent (approximately 14 miles southwest), Calaveras (approximately 10 miles southwest), Quien Sabe (approximately 9 miles southwest) and the Ortigalita (approximately 8 miles east). To the east are potentially-active segments of the San Joaquin fault system a west-dipping blind thrust fault that defines generally the boundary between the Coast Ranges and Great Valley provinces.

In general, ground shaking produced on the Ortigalita fault is expected to govern the seismic design of the dam. This fault is capable of producing a maximum credible earthquake of magnitude 6.9. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential of the Project to expose people or structures to strong seismic ground shaking.

- a) iii) **Less than Significant Impact.** Liquefaction is the temporary transformation of saturated and very low cohesion or cohesionless soils into a viscous liquid as a result of strong ground shaking. Liquefaction may occur in water-saturated sediment during moderate to great earthquakes. Liquefied sediment loses strength and may fail; causing damage to structures.

The majority of the Project area is situated on Mesozoic bedrock units that are not subject to liquefaction. Quaternary alluvial sediments deposited in the Pacheco Creek channel may be susceptible to liquefaction during strong ground shaking. These potentially liquefiable materials would be removed during Project development and replaced with compacted soil materials in accordance with all relevant provisions of the current DSOD and Uniform Building Codes/California Building (UC/BC) Code standards. With these provisions in place, risks would be minimized to the extent feasible.

With these provisions in place, the impact is considered less than significant. The EIR will further evaluate potential of the Project to expose people or structures to seismic-related ground failure.

- a) iv) **Potentially Significant Impact.** Several regional-level geologic mapping programs have been conducted in the Pacheco Pass area. Numerous large landslides and landslide complexes have been mapped in the dam and reservoir areas. A large landslide complex, encompassing approximately 300 acres, has been identified in close

proximity to the downstream side of the proposed left dam abutment. A smaller (approximately 35 acre) landslide has been identified in proximity to the upstream side of the left dam abutment. In both cases, the lateral and vertical extent of these landslide features in the vicinity of the dam footprint will require careful assessment to determine their actual extent. The stability of any landslides within the dam footprint will require careful stability analysis.

Interim plans have been made to use some of the landslide deposits as borrow areas for dam construction. One of the major considerations that will determine the feasibility of a dam at this location is the local availability of fine-grained materials that may be used as the low-permeability core of the dam. Landslides in the area may provide the necessary fine-grained materials. Landslide deposits may also be used as sources for fill to construct the earthen upstream and downstream dam shells. Landslides within the Project area will need to be investigated as part of design efforts, to verify adequate materials are available of the quality and quantity needed to construct a new dam. Site preparation activities may also include stabilization of potential or active landslide areas, where these areas will not be removed or stabilized during borrow excavation activities. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential for the Project to expose people or structures to landslides.

- b) Potentially Significant Impact.** The proposed Project would involve construction earthwork that would require removal of topsoil, alluvium, landslide materials and weathered bedrock. Notably, proposed excavation, associated with borrow mining activities and dam embankment construction, could have the potential to remove substantial quantities of intact erodible earth materials from areas undisturbed by previous development.

Construction activities and reservoir-level fluctuations would have the potential to contribute to accelerated soil erosion. During construction, clearing, grubbing, and grading activities would remove ground cover, and expose and disturb soil on slopes. Exposed and disturbed soil would be vulnerable to erosion from runoff during construction, with soil particles becoming entrained in the runoff. A stormwater pollution prevention plan (SWPPP) would also be required, providing an additional regulatory mechanism to ensure effective erosion control during construction. With erosion control, BMPs and SWPPP compliance impacts related to accelerated erosion during construction are expected to be less than significant.

Altered drainage patterns on site, as a result of construction, could also cause redirection and concentration of runoff, potentially further exacerbating the erosion problem. However, SCVWD routinely implements extensive erosion and sediment control BMPs. Exposed soils within the work area would be stabilized following the completion of earthmoving activities. Erosion control BMPs, such as silt fences, straw hay bales, gravel or rock-lined ditches, water check bars, broadcasted straw, hydroseeding, or other suitable measures would be implemented consistent with SCVWD's SWPPP requirements.

Upon completion of construction activities, any temporary facilities would be demobilized and site restoration measures would be implemented to minimize soil erosion. Erosion

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resulting from reservoir fluctuations would be contained by the reservoir and could be minimized through management of reservoir-level operations.

Serpentinite rock, common in the Franciscan Assemblage, has not been identified within the Project area. Should such sensitive rock deposits be encountered, removal of erodible earth materials in undisturbed areas would be considered potentially significant.

The EIR will further evaluate potential impacts to soil erosion or loss of topsoil that may result from construction of the Project.

- c) Less Than Significant Impact.** As discussed above, under items a.iii) and a.iv), liquefaction and landsliding present potentially significant impacts to the project without mitigation.

Lateral spread or flow are landslides that commonly occur on gentle slope, and they have a rapid, fluid-like flow movement, typically as a result of pore pressure build-up or liquefaction in a shallow deposit during an earthquake. Within the project area, alluvial sediments overlying the Pacheco Creek valley floor could be subject to lateral spreading during a seismic event. As discussed above, these alluvial sediments would be removed during Project development and replaced with compacted soil materials in accordance with all relevant provisions of the current DSOD and Uniform Building Codes/ California Building Code standards. With these provisions in place, risks would be minimized to the extent feasible.

Subsidence is a diverse form of ground failure, ranging from small or local collapses to broad regional lowering of the ground surface. Causes of subsidence include dewatering (oxidation) of peat or organic soils, dissolution in limestone aquifers (karst), first-time wetting of moisture-deficient low-density soils (hydrocompaction), natural compaction, liquefaction, crustal deformation, subterranean mining, and withdrawal of fluids (e.g. groundwater, petroleum, geothermal). The Project area is underlain by relatively thin layers of soil/colluvium (on valley flanks) or streambed alluvium. These materials are, in turn, underlain by bedrock of sheared shales (mélange) and cemented sandstone (greywacke). No peat or organic-rich soil, limestone, subterranean mining or fluid withdrawal activities have been identified within the Project region. Low-density alluvial materials potentially capable of natural compaction or liquefaction would be removed during construction of the Project and thus would not be a factor. Crustal deformation is typically a broad regional effect and given the scale of the Project, is not considered a potential issue. As such, there is no evidence of any of the likely causes of subsidence within the Project area. Therefore, there is no evidence of any of the likely causes of subsidence.

Collapsible soils are dry, loose, low-density materials possessing a structure that collapses and compacts under the introduction of water or excessive loading. Common throughout the southwest, collapsible deposits typically consist of young alluvial fans, debris flow sediments, and wind-blown sediments (loess). Soil collapse occurs when deep saturation weakens the clay bonds that holds the soil structure together. Within the Project area, there is no evidence of any of the likely collapsible deposits susceptible to collapse. The impact is considered less than significant. The EIR will further evaluate

potential impacts from on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse that may result from construction of the Project.

d) Less Than Significant Impact. Expansive soils (reactive soils) contain a relatively high percentage of clay minerals possessing the potential to shrink and swell with changing moisture conditions. The main soil types found in the vicinity of the Pacheco Dam and Reservoir site, based on the Natural Resources Conservations Service (<http://websoilsurvey.nrcs.usda.gov>) for the southeastern Santa Clara County area (Natural Resources Conservations Service 2017), are characterized by the presence of the following soil units:

- **Cortina very gravelly loam** – floodplain deposit derived from metamorphic and sedimentary rock, excessively drained, low to medium expansion potential;
- **Gaviota loam and gravelly loam** – blankets mountain slopes, residuum weathered from sandstone and/or shale, well drained, low expansion potential;
- **Los Gatos/Gaviota loam complex** – blankets mountain slopes, residuum weathered from sandstone, well drained, medium expansion potential;
- **Pleasanton gravelly loam** – alluvial fan deposits at toe of slopes, well drained, low to medium expansion potential;
- **Riverwash** – riverbed deposits of sand, coarse sand and sandy loam, low expansion potential;
- **Rock land** – alluvium or residuum on mountain slope, excessively drained, low expansion potential; and
- **Vallecitos loam and rocky loam** – blankets mountain slopes, residuum weathered from shale, well drained, medium to high expansion potential.

Los Gatos/Gaviota soils of medium expansion potential are found in the vicinity of the proposed Project Area. Within the rest of the Pacheco Creek area, approximately 50 percent of the area consists of the medium to high expansion potential Vallecitos soil units and about 40 percent of the low expansion potential Gaviota soil units (Natural Resources Conservations Service 2017). Structural foundation locations would be evaluated for expansion potential during design investigations, and any potential highly expansive soil materials would either be removed and replaced with low expansion potential materials, or the foundation system would be designed to resist shrink/swell movements. The impact is considered less than significant. The EIR will further evaluate potential impacts from expansive soil that may result from construction of the Project

e) No Impact. No septic tanks or alternative wastewater disposal systems would be installed as part of the Project. Therefore, there is no impact and the EIR will not evaluate the impacts related to soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system.

2.4.7 Greenhouse Gas Emissions

Table 2-8. Greenhouse Gas Emissions Checklist

| VII. GREENHOUSE GAS EMISSIONS: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | X | | |
| b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | X | | |

Environmental Setting

Climate change results from the accumulation in the atmosphere of greenhouse gas (GHG) emissions, produced primarily by the burning of fossil fuels for energy. These man-made GHG are widely accepted in the scientific community as contributing to global warming.

While some of the increase is explained by natural occurrences, *Climate Change 2007: The Physical Science Basis: Summary for Policymakers* (Intergovernmental Panel on Climate Change 2007) asserts that the increase in temperature is very likely (approximately 90 percent) due to human activity, most notably the burning of fossil fuels. For California, similar effects are described in *Our Changing Climate: Assessing the Risks to California by the California Climate Change Center* (California Climate Change Center 2006).

Because GHGs (CO₂, methane, and nitrous oxide) persist and mix in the atmosphere, emissions anywhere in the world affect the climate everywhere in the world. Consequently, GHG emissions that contribute to climate change result in a worldwide cumulative impact (global warming), rather than a local or regional project-specific impact typically associated with criteria pollutants. Impacts related to GHG emissions are discussed in the context of the proposed Project's contribution to statewide and global GHG emissions.

The California Global Warming Solutions Act of 2006 (AB 32) established a comprehensive program of regulatory and market mechanisms to achieve reductions in GHGs that are quantifiable, real, and cost-effective. The Act directs responsibility for monitoring and reducing GHG emissions to the Air Resources Board (ARB). Among the most significant components of AB 32 is the requirement to reduce carbon emissions in California to 1990 levels by the year 2020.

The BAAQMD developed CEQA guidelines, in 1999 and 2010, to assist local jurisdictions in evaluating potentially adverse impacts on air quality. The 1999 CEQA guidelines provided thresholds for air quality emissions, but did not provide thresholds for GHG emissions. In 2010, BAAQMD adopted air quality guidance which included quantitative thresholds of significance and recommended BMPs and mitigation measures for GHG emissions, among other pollutants. The thresholds were challenged in court. Following litigation in the trial court, the court of appeal, and the California Supreme Court, all of the thresholds were upheld. However, in an opinion issued on December 17, 2015, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to

environmental hazards unless the Project would exacerbate existing environmental hazards. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, and schools near sources of toxic contamination.

In view of the Supreme Court's opinion, BAAQMD has indicated that local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination, where such an analysis is required by CEQA, or where the agency has determined that such an analysis would assist in making a decision about the Project. However, the thresholds are not mandatory, and agencies should apply them only after determining that they reflect an appropriate measure of a Project's impacts. The SCVWD has adopted the 2010 BAAQMD thresholds for the purposes of this analysis because they were established based on substantial evidence and represent the most current and appropriate thresholds for use at this time.

Explanations for VII. Greenhouse Gas Emissions

- a) **Potentially Significant Impact.** The Project would generate temporary construction-related GHG emissions, with most of the emissions generated by off-road heavy construction equipment, materials hauling, and daily construction worker trips. The long-term operation of the Project, however, would not differ substantially from baseline conditions, and as such would not generate substantial new or altered sources of GHGs emissions. Any potential impacts from GHG generation during construction would be short-term and temporary, but could be significant. Project operation could result in increased GHG emissions through increased long term pumping of water to Pacheco Reservoir from Central Valley Project (CVP) facilities. These issues will be evaluated further in the EIR, which will quantify emissions and compare them to numeric significance thresholds. The impact is considered potentially significant. The EIR will further evaluate potential impacts from generation of greenhouse gas emissions that may result from construction of the Project

- b) **Potentially Significant Impact.** Construction of the proposed Project would generate temporary short-term GHG emissions. Long-term operation of the Project could have a negative impact on GHG emissions due to increased long term pumping of water to Pacheco Reservoir from CVP facilities. Periodic maintenance activities would be incorporated into existing SCVWD maintenance schedules and would, therefore, result in a negligible change to vehicle miles traveled and GHG emissions.

Emissions generated during Project construction could be significant. This issue will be evaluated further in the EIR, which will quantify emissions and compare them to numeric significance thresholds.

2.4.8 Hazards and Hazardous Materials

Table 2-9. Hazards and Hazardous Materials Checklist

| VIII: HAZARDS AND HAZARDOUS MATERIALS: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, storage or disposal of hazardous materials? | X | | |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | X | | |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school? | | | X |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | X | | |
| e) Create a significant hazard to the public or the environment from existing hazardous material contamination on site or nearby? | X | | |
| f) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a substantial safety hazard for people residing or working in the project area? | | | X |
| g) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | X |
| h) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | X | |
| i) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | X | |

Environmental Setting

The Project site is on land owned by PPWD and private property owners. Surrounding land uses include grazing lands and single-family rural residences. The nearest airport to the Project site is the Frazier Lake Airpark in Hollister, located approximately 15 miles from the Project area. The nearest school is Pacific Point Christian School, which is located approximately 19 miles southwest of the Project area at 2220 Pacheco Pass Highway, Gilroy.

According to the California Environmental Protection Agency, the provisions in Government Code Section 65962.5 are commonly referred to as the “Cortese List.” The list, or a site’s presence on the list, has bearing on the local permitting process as well as on compliance with CEQA. The Cortese List, which includes the resources listed below, was reviewed for references to the proposed Project site:

- List of Hazardous Waste and Substances Sites from the Department of Toxic Substances Control (DTSC) EnviroStor database

- List of Leaking Underground Storage Tank Sites from the State Board GeoTracker database
- List of solid waste disposal sites identified by the State Board with waste constituents above hazardous waste levels outside the waste management unit
- List of “active” Cease and Desist Orders and Cleanup and Abatement Orders from the State Board
- List of hazardous waste facilities subject to corrective action identified by DTSC

Explanations for VIII. Hazards and Hazardous Materials

a, b) Potentially Significant Impact. Implementation of the Project would potentially require the routine transfer, use, storage, or disposal of hazardous materials. During construction, hazardous materials typically associated with proposed construction activities, such as fuel, oil, explosives and lubricants would be employed in the Project and staging areas. Operation of intake valves and gates would require hydraulic fluids, typically oil.

However, the Project would utilize non-hazardous hydraulic fluids for hydraulic systems for the upstream valves and gates if feasible. If this is not feasible, then all hydraulic systems would be separated from reservoir and creek waters such that preventative maintenance can occur with no risk of spills, and if spills were to occur, they would be contained and separate from receiving waters. SCVWD would comply with all relevant federal, state, and local statutes and regulations related to transport, use, storage, or disposal of hazardous materials, and all materials designated for disposal would be evaluated for appropriate state and federal hazardous waste criteria. Construction and operation activities would also incorporate best management practices such as hazardous materials storage and handling practices; vehicle and equipment maintenance, storage, and operation measures; maintenance of on-site spill control kits; stormwater pollution prevention plan development, and worksite housekeeping measures. These measures would minimize the potential release of hazardous materials into the wetlands/waterways resulting from the routine use, storage, or disposal of hazardous materials. Therefore, impacts related to the transport, use, storage, or disposal of hazardous materials would be less than significant, and the proposed Project is not anticipated to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The improper use, storage, handling, or disposal of hazardous materials could allow hazardous releases from equipment or through other means during project construction or operation activities, thereby exposing construction workers and SCVWD personnel to hazardous materials. There could also be accidental or intentional acts of destruction, including releases of hazardous materials that would contaminate soil or degrade water quality. SCVWD will utilize the appropriate BMPs to reduce the potential impact of the Project from hazardous materials releases to people and the environment. Therefore, the impact is considered potentially impact. The EIR will further evaluate potential

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impacts from the routine transport, use, storage, or disposal of hazardous materials or release of hazardous materials that may result from construction of the Project

- c) No Impact.** There are no existing or proposed city-operated schools within one quarter mile of the proposed Project, therefore there would be no impact on public safety hazards related to schools. Therefore, there is no impact and the EIR will not evaluate the impacts related to the emission of hazardous materials or waste within one-quarter mile of an existing or proposed school.
- d, e) Potentially Significant Impact.** The proposed Project is not currently included on any list of hazardous materials sites. Based on a review of readily ascertainable public information for the site and vicinity, there is no existing hazardous material contamination on site or nearby. However, there is the potential for discovery of previously unknown contamination during ground excavation activities. If hazardous levels of contaminants are encountered, a significant impact on construction workers, the public, and environment could result. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts from hazardous materials or hazardous materials contamination that may result from construction of the Project
- f, g) No Impact.** There are no airports or airport land use plans established within two miles of the proposed Project, therefore there would be no impact on public safety hazards related to airports. The EIR will not evaluate the impacts of the emissions of hazardous materials on public airports or private airstrips.
- h) Less than Significant Impact.** Increased traffic, short-term lane closures, and detours on SR 152 during construction could have the potential to interfere with implementation of emergency response plans. However, because SCVWD would comply with all adopted emergency response plans and other measures as required by Santa Clara County and California Department of Transportation (CalTrans) during construction activities to ensure that appropriate safety measures are in place in the event of an emergency impacts would be less than significant. See also Section 2.4.16 Transportation/Traffic. The EIR will further evaluate potential impacts to emergency response plans and emergency evacuation plans that may result from construction of the Project.
- i) Less than Significant Impact.** According to the California Department of Forestry and Fire Protection (CalFire) map of Fire Hazard Severity Zones in Santa Clara County, the majority of the Project site is located in areas considered as either “High” or “Very High” hazard severity zones. Downstream of the site, past the junction of Pacheco Creek and Pajaro River, many of the nearby communities are located within the wildland urban interface of the State Response Area (California Department of Forestry and Fire Protection 2007). A portion of the site is also located within the Local Response Area, and is not considered a high fire hazard severity zone. Wildlands in the Project area could catch fire if an errant spark or heat from construction equipment were to provide ignition. This impact is limited to the construction phase of the Project. During construction, SCVWD would adhere to all fire prevention and protection requirements and regulations of the Santa Clara County and Public Resources Code wildland fire safety measures, as applicable. Therefore, the impact is considered less than significant.

2.4.9 Hydrology

Table 2-10. Hydrology Checklist

| IX. HYDROLOGY: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---------------------------------------|-------------------------------------|------------------|
| a) Violate any water quality standards or waste discharge requirements? | X | | |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | X | |
| c) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | X | | |
| d) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | X | |
| e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | X | |
| f) Otherwise substantially degrade water quality? | X | | |
| g) Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | X |
| h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows? | | X | |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | X | |
| j) Inundation by seiche, tsunami, or mudflow? | | | X |

Environmental Setting

Pacheco Reservoir is situated on Pacheco Creek, a tributary of the Pajaro River. Pacheco Creek drains approximately 165 square miles (above San Felipe Lake) in Santa Clara and San Benito Counties. The watershed topography is mountainous and steep in the upper portions. Water released from Pacheco Reservoir flows into the North Fork Pacheco Creek and joins the South Fork of Pacheco Creek just upstream from SR 152. Other main tributaries of the Pajaro River include Corralitos, Uvas, Llagas, and Santa Ana Creeks. Historically, flooding has occurred along both Pacheco Creek, including a levee failure along a lower section of the creek in 2017, and the Pajaro River.

The existing Pacheco Reservoir provides 6,150 acre feet of water storage capacity. The existing reservoir captures and stores seasonal runoff from within the 65 square mile watershed. The water stored in Pacheco Reservoir is released into Pacheco Creek, a perennial stream, to recharge the groundwater basin.

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Operations at Pacheco Reservoir, under existing conditions, periodically caused the Reservoir to go dry. Historic records are limited, and it appears likely that different reservoir operation strategies were employed at different times. Pacheco Reservoir storage records available for the 29 years between 1975 to 2003, reflect that the Reservoir was drained in 17 of the 28 years, which is 60 percent of all years.

The proposed Project would inundate the majority of the existing reservoir. The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam. The water storage capacity of Pacheco Reservoir will increase by 136.1 TAF, raising the storage capacity to 141.6 TAF.

Water quality is regulated under the federal CWA and the California Porter-Cologne Water Quality Control Act. Under these statutes, Beneficial Uses have been established and divided into 20 standards by the Central Coast Regional Water Quality Control Board (CCRWQCB). Beneficial Uses at Pacheco Reservoir include municipal and domestic supply, agricultural supply, groundwater recharge, water contact and non-contact water recreation, wildlife habitat, cold and warm freshwater habitat, fish spawning, preservation of rare and endangered species, freshwater replenishment, navigation and commercial and sport fishing (Central Coast Regional Water Quality Control Board 2016). Beneficial Uses designated for Pacheco Creek include municipal and domestic supply, agricultural supply, groundwater recharge, water contact and non-contact water recreation, wildlife habitat, cold and warm freshwater habitat, fish migration, fish spawning, preservation of biological habitats, preservation of rare and endangered species, freshwater replenishment, and commercial and sport fishing (Central Coast Regional Water Quality Control Board 2016). The Pacheco Reservoir releases are not known to contribute to the identified impairments to Beneficial Use. However, Beneficial Uses at Pacheco Creek are identified as impaired under CWA Section 303(d) due to high concentrations of fecal coliforms, low dissolved oxygen and turbidity sourced from agriculture, natural and grazing-related sources, as well as from storm drainage discharges, animal discharges, and sewer spills and leaks (Central Coast Regional Water Quality Control Board 2016, County of San Benito 2015, State Water Resources Control Board 2010).

The Sustainable Groundwater Management Act (SGMA) was passed in 2015. SGMA requires high and medium priority basins, as defined by DWR California Statement Elevation Monitoring Program, to form Groundwater Sustainability Agencies (GSA) and develop Groundwater Sustainability Plans in order to reduce or eliminate undesirable results from groundwater pumping. SCVWD intends to enter into agreements with each GSA that could be affected by the Project, consistent with Article 8 Interagency Agreements (Water Code §10727.6), or through voluntary coordination agreements.

Groundwater subbasins affected by the Project include:

- Llagas Area, Bolsa Area, Hollister Area, and the San Juan Bautista Area subbasins in the Gilroy-Hollister Basin
- Pajaro Valley Subbasin in the Corralitos Basin.

- Delta-Mendota Subbasin in the San Joaquin Valley Basin (via increased Central Valley Project Improvement Act Incremental Level 4 Refuge water supplies provided by the Project)

Explanations for IX. Hydrology

a, f) Potentially Significant Impact. Several Project construction-related activities have the potential to degrade water quality, in a manner that could exceed federal and/or state water quality standards and/or otherwise substantially degrade water quality. The Reservoir would naturally drain for one construction season and a cofferdam and a diversion channel would be constructed to maintain a dry construction area around the dam.

Pacheco Reservoir would drain and the discharged water would travel downstream to Pacheco Creek through existing outlets. The discharged water would be expected to contain elevated levels of suspended solids, high water temperatures, and low dissolved oxygen levels, especially as the water level in the reservoir declines. Consequently, sedimentation basins would be put in place to reduce turbidity levels and the impact of suspended sediments in the flow, prior to the water discharge into the downstream channels. Discharges of poor quality water from the Reservoir could adversely affect water quality conditions in Pacheco Creek, especially during the summer low flow period when temperature levels are already elevated. Adverse effects on water quality in Pacheco Creek during reservoir draining may extend downstream for several miles. However, Pacheco Reservoir is drained in approximately 60% of years under existing operations. Therefore, water quality impacts from dewatering of the Reservoir are not expected to change significantly beyond existing conditions.

Throughout Project construction, the excavation areas— including the dam embankments, borrow areas, and pipelines— would require dewatering of any nuisance inflows. These inflows, along with runoff from exposed soils in active work areas, are likely to contain high concentrations of particulates (high suspended solids/turbidity), and potentially, residual petroleum products from construction equipment. If discharged to Pacheco Creek directly, these pollutants would potentially exceed federal and state water quality standards or otherwise degrade beneficial uses. However, proper construction practices will be followed to control the impact of and the exposure time to potentially harmful pollutants.

Temporary staging areas are identified in various locations in the Project site. Some of the staging areas would be used to store and process large quantities of rock material for dam construction. These also would have the potential to generate contaminated runoff.

To address temporary impacts, SCVWD would incorporate soil stabilization, sediment control, tracking control, waste management and pollution control, and non-stormwater management BMPs into Project design. A SWPPP would also be required, providing an additional regulatory mechanism to ensure that adverse effects to water quality are minimized to the maximum extent practicable during construction. Potential water quality degradation from construction of the proposed Project will be evaluated further in the EIR. Measures to reduce the level of significance of this impact will also be identified.

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After Project construction, the dam and reservoir would be operated in compliance with federal, state, and local regulations. Project operation would not contribute pollutants identified as impairing water quality in Pacheco Reservoir or Pacheco Creek. In addition, the operation of the new reservoir will provide for improved flows and temperatures in Pacheco Creek. Increased late-spring, summer, and fall flows and reduced water temperatures provided by the Project are anticipated to have beneficial effects on dissolved oxygen levels in Pacheco Creek. However, due to potential water quality and waste discharge issues from project construction, the impact is considered potentially significant. The EIR will further evaluate potential impacts to water quality that may result from construction of the Project

- b) Less than Significant Impact.** The Pacheco Reservoir Expansions Project has the potential to provide positive contributions in seven California groundwater subbasins, increasing water for recharge downstream of the reservoir in Pacheco Creek and the Pajaro River. In subbasins underlying SCVWD service areas, additional surface water supplies developed through the Project would reduce dependence on groundwater, increasing groundwater storage and groundwater levels. In the Gilroy-Hollister Valley Basin, the Project would provide landowners near Pacheco Creek reliable supplies of high-quality groundwater in-lieu of delivered surface water, which could allow San Benito County Water District to re-prioritize surface water deliveries to areas dependent on groundwater. In the Pajaro Valley, the Project can provide for continued in-channel groundwater recharge in the reach of the Pajaro River between Chittenden and Murphy Crossing—a zone that experiences seawater intrusion, affecting groundwater quality for the City of Watsonville. The delivery of Incremental Level 4 refuge water supply to Grassland Resource Conservation District in below normal water years can, in part, reduce reliance on groundwater pumping in a region that has experienced significant land subsidence due to chronic overdraft.

Project construction activities may temporarily impact the recharge of groundwater basins downstream of Pacheco Reservoir. During the Project, the Reservoir would be dewatered, thus reducing the availability of water for recharge of groundwater basins downstream. This will only minimally change the seasonal flows in Pacheco Creek during construction. After the Project is complete, Pacheco Creek will experience yearlong flow, contributing to a net surplus of raising the groundwater table level. Operational discharges from Pacheco Reservoir to support groundwater recharge activities would resume and increase after the Project is constructed. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to groundwater supplies that may result from construction of the Project

- c) Potentially Significant Impact.** Project construction would involve draining Pacheco Reservoir, discharges of water from construction work areas to Pacheco Creek, and substantial ground excavations at the dam and five borrow locations near the dam. These actions could alter the existing drainage patterns in the Project area, such that indirect erosion or siltation would occur.

During Project construction, water discharged to Pacheco Creek would occur through existing outlets from the dam, and temporary discharges from dewatered construction

areas. Measures would be implemented to reduce the potential impacts of construction-related discharges to Pacheco Creek.

Up to five borrow areas would be excavated to obtain materials for dam construction (See Exhibit 11). The majority of these areas will be inundated by the expansion of the reservoir. Excavation of the borrow areas may locally alter drainage runoff patterns, but would not increase the timing or amount of runoff to nearby waters. Moreover, most the borrow areas would be inundated by the expanded reservoir. Construction of the access road could lead to loose sediment and small scale erosion. See Section 1.5.2 Site Preparation and Section 2.4.11 Mineral Resources for information about the construction and composition of the borrow areas and access road.

The new embankment dam would be constructed on Pacheco Creek, 0.5 mile upstream from the existing North Fork Dam. The existing dam would be removed and the historical Pacheco Creek channel would be restored between the new dam and the existing dam through the existing Pacheco Reservoir. The channel will be designed to reduce streambank erosion (e.g., using bank stabilizing materials), and riparian vegetation will be planted to initiate growth of a new riparian forest along the restored channel. Excavation and related construction activities for the channel restoration may temporarily increase erosion and siltation. However, measures would be implemented to reduce the potential impacts of these construction-related activities.

Following construction, operation of the Project would increase the potential for shoreline erosion due to the expanded reservoir. During large flood events, the expanded reservoir will reduce peak flows in Pacheco Creek. Reduced flood flows may reduce erosion downstream of the new dam along Pacheco Creek.

The impacts described above include several potentially significant issues, and will be evaluated further in the EIR. The EIR will further evaluate potential impacts to existing drainage patterns that may result from construction of the Project.

- d) Less than Significant Impact.** Project operation has the potential to substantially alter the existing drainage patterns downstream of the new dam in Pacheco Creek and Pajaro River by significantly decreasing the volume of water discharged from Pacheco Reservoir during flood events. The Project has the potential to reduce flood flows and the extent of the 100-year floodplain. Therefore, the impact is less than significant. The EIR will further evaluate potential impacts to existing drainage patterns that may result from construction of the Project
- e) Less than Significant Impact.** There are currently no existing or planned stormwater drainage systems in the project area. Under existing conditions, naturally occurring runoff is captured in Pacheco Reservoir and then released downstream in Pacheco Creek. Under operations of the Project, larger volumes of naturally occurring runoff would be captured in the expanded reservoir in comparison to the existing conditions.

No new sources of polluted runoff would be created by the proposed Project. As described above, several Project construction-related activities have the potential to degrade water quality and create additional sources of polluted runoff. A SWPPP would

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be prepared for the construction sites, to ensure adverse effects to water quality are minimized to the maximum extent practicable during construction. Potential water quality degradation from construction of the proposed Project will be evaluated further in the EIR. Measures to reduce the level of significance of this impact will also be identified.

As the Project would reduce the risk of flooding downstream of the new dam and would not provide substantial additional sources of polluted runoff, the impact is considered less than significant. The EIR will further evaluate potential impacts to existing stormwater systems that may result from construction of the Project

- g) No Impact.** The proposed Project would not involve placement of housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map. Therefore, there is no impact and the EIR will not evaluate the impacts related to placing housing within a 100-year flood area.
- h) Less than Significant Impact.** The North Fork Dam currently impounds flows within Pacheco Reservoir and protects downstream areas from flood impacts. The new dam and associated infrastructure will continue to provide these functions. The expanded size of the reservoir relative to existing conditions would increase the system's ability to capture and manage flood flows to prevent damage. The proposed Project has the potential to reduce the extent of the damages from a 100-year flood by reducing flood flows downstream of the reservoir. Therefore, the impacts are considered less than significant. The EIR will further evaluate the potential for Project construction and operation to place structures within a 100-year flood-hazard areas.
- i) Less Than Significant Impact.** There is limited development downstream of the proposed dam. However, the Project has the chance of exposing people to the risk of loss, injury, or death involving flooding due to the proximity of SR 152 to Pacheco Creek. If the dam were to fail, the increased flow into Pacheco Creek could cause damage on SR 152 and downstream along Pacheco Creek and Pajaro River. The new dam, including the spillway, would be designed to meet DSOD standards.

North Fork Dam currently impounds flows within the existing reservoir and protects downstream areas from flood impacts. The expanded size of the reservoir relative to existing conditions would increase the system's ability to capture and manage flood flows to prevent damage. The proposed Project has the potential to reduce downstream flood stages, thereby potentially reducing the risk of levee failure.

The impacts are considered to be less than significant. The EIR will further evaluate potential impacts of exposing people or structures to a significant risk of loss, injury or death involving flooding that may result from construction of the Project.

- j) No Impact.** It is unlikely the Project operation activities may result in a seiche, due to the relatively small capacity of the expanded reservoir. It is also not anticipated that Project construction or operation would result in a mudflow. The Project site is located too far inland to be influenced by a tsunami event. Thus, the Project would have no impact on exposing people or structures to loss, injury or death involving inundation by seiche,

tsunami or mudflow. Therefore, there is no impact and the EIR will not evaluate the impacts potential inundations by seiche, tsunami, or mudflow.

2.4.10 Land Use Planning

Table 2-11. Land Use Planning Checklist

| X. LAND USE AND PLANNING: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|--------------------------------|------------------------------|-----------|
| a) Physically divide an established community? | | | X |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | X | | |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | | X | |

Environmental Setting

The Project site is within the sphere of influence of unincorporated Santa Clara County. The lands surrounding Pacheco Reservoir are rural and primarily used for grazing. Two single-family residences are located one mile south of the existing North Fork Dam. Several small ranching facilities located along the North Fork of Pacheco Creek— collectively referred to as O'Connor Ranch— would be inundated by the expanded reservoir.

Explanations for X. Land Use Planning

- a) **No Impact.** There are no established communities in close vicinity to the Project site. Therefore, the Project would not involve activities or construction of features that would divide an established community and there is no impact. The EIR will not evaluate the impacts related to physically dividing an established community.
- b) **Potentially Significant Impact.** Project construction activities would primarily occur on land owned by PPWD. In addition, temporary and permanent rights-of-way and acquisitions of private property would be needed for Project implementation. Existing land uses on PPWD properties would not conflict with existing or future designated uses of the properties. Because the disruption in land uses would be temporary, this is not considered a potentially significant impact.

Conflicts with existing use of private parcels, such as by preventing activities or occupation of structures from continuing, removal, or relocation of the structures— or preventing the designated use of the site from occurring in the future— may result in a potentially significant impact. The EIR will further evaluate this topic, using additional information regarding the existing uses of properties and the Project's proposed temporary and permanent alterations to the site. The EIR will further evaluate potential impacts to local land use plans or policies that may result from construction of the Project.

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c) **Less than Significant Impact.** See Section 2.4.4 Biological Resources for more information.

2.4.11 Mineral Resources

Table 2-12. Mineral Resources Checklist

| XI. MINERAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|--------------------------------|------------------------------|-----------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | X |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | X |

Environmental Setting

Many mineral resource deposits in Santa Clara County are of regional or state-wide significance, as determined by state agencies (County of Santa Clara 1994). Mineral resources of regional or statewide significance, found and extracted in Santa Clara County, include construction aggregate (crushed stone, sands, and gravels), deposits of limestone, and, to a lesser extent, salts derived from evaporation ponds at the edge of San Francisco Bay. While some sand and gravel resources have been identified within Pacheco Creek downstream of the Project area (California Division of Mines and Geology 1999), none have been identified within the Project area. The materials to be quarried from the Project areas are not commonly economically desirable for mining.

The California Geological Survey Guidelines for Classification and Designation of Mineral Lands (California State Mining and Geology Board 2000) contains guidelines for classification and designation of mineral lands for determining suitability as Aggregate Resources Areas. The guidelines include specific land uses that are considered to be generally incompatible with mining and have been excluded as ARAs. The Economic Exclusion category includes major public or private engineering projects, including dams, and therefore would exclude the Project area as one containing minerals of state or local importance. Therefore, even if the Project site contained minerals of state-wide or local importance, the Project would be exempt from complying with state guidelines.

Explanations for XI. Mineral Resources

a, b) No Impact. Five on-site borrow areas have been identified as sources for the materials necessary to construct the Pacheco Dam embankment, spillway, cofferdam and other Project facilities (Wahler 1993). The five borrow areas are situated primarily in areas that will be partially inundated by the proposed Project. Preparation of the borrow areas include the reservoir borrow areas, the spillway area and the existing dam site prior to its removal. Preparation would include grubbing, stripping and disposal of topsoil, and implementation of any associated work access or material processing areas. Exhibit 11 shows borrow acreages for the proposed Project.

The areas for impervious borrow materials would be along the Pacheco Creek. The material in this area was classified as a low plasticity silt or clay (Wahler 1993). The potential random fill borrow area consists of a mix of silt, sand, gravel and boulders. The proposed rock borrow area was determined through field observation to be primarily cemented greywacke sandstone.

Based on the Economic Exclusion category presented in the California Geological Survey Guidelines for Classification and Designation of Mineral Lands, the material from these borrow areas are not considered minerals of state-wide importance and would not affect future mining of mineral resources. Excavated materials would be directly used for dam reconstruction and would not be sold or distributed to other parties.

It is not expected that borrow materials of sufficient quality to be used as drain/filter rock will be found within the Project boundaries; therefore, these materials will likely need to be imported from an outside, commercial resource.

Project activities would primarily rely upon mineral resources found on site. No important mineral resources are present within the Project footprint that would become unavailable as a result of the Project. With the exception of good quality rock needed for drain/filter materials, the Project would not use a substantial amount of mineral resources from offsite, or involve other activities that would adversely affect future mining in the County. There would be no impact on mineral resources of local or state-wide importance. The EIR will not evaluate the impacts related to the loss of availability or a known or locally-important mineral resource.

2.4.12 Noise

Table 2-13. Noise Checklist

| XII. NOISE: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---------------------------------------|-------------------------------------|------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | X | | |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | X | | |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | X | |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels without the project? | X | | |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | X |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | X |

Environmental Setting

Noise standards are typically established at the state and local level. The Santa Clara County Noise Ordinance would apply to construction and operational noise affecting homes near Pacheco Reservoir. The ordinance sets specific daytime and nighttime noise limits at residential areas for both construction and operational phases. However, it does not apply to nonresidential recreational areas and vehicles traveling on public roads. There are no substantial noise sources within the Project area, and the existing noise environment is dominated by natural sounds and traffic on SR 152.

Explanations for XII. Noise

a, b) Potentially Significant Impact. The proposed Project involves construction of a new dam, new pump station and new pipeline and related conveyance improvements, and access roads. Construction activities may require double shifts (two 10-hour shifts per day) up to six days per week to meet the construction schedule. Construction activities include removal of the existing North Fork Dam, and construction of a temporary cofferdam, new embankment, and new spillway. Construction methods for dam removal and the cofferdam would consist of clearing, grubbing, stripping of disposal of topsoil; and grading, consisting of excavation of soil and rock, filling, and compacting. Construction methods for the new embankment and spillway include excavation and processing of borrow materials; hauling, placing and compacting fill and backfill, and

forming and placing concrete. In addition, construction of the outlet pipe between the inlet structure and the pump station area may involve very limited blasting.

Each phase of Project construction would generate noise and groundborne vibration from the operation of heavy equipment and supporting stationary equipment— such as generators, materials, and screening equipment— as well as noise from blasting which is anticipated to occur one or two times per week.

The impacts of the noise and vibrations would be primarily limited to the two residential facilities located south of the North Fork Dam and O'Connor Ranch. The homes south of the dam are located several miles from the nearest construction zone, and would be partially shielded from construction noise by rugged terrain. It is anticipated that these properties, along with O'Connor Ranch, would be acquired prior to construction activities commencing. However, if the properties are not acquired, construction activities on Pacheco Reservoir would expose persons to noise levels in excess of local standards established by Santa Clara County, and to excessive groundborne vibration. In addition, blasting activities could be audible from portions of Henry W. Coe State Park, particularly along the ridgelines overlooking Pacheco Reservoir.

It is not anticipated that there would be long-term noise impacts from Project operation. However, due to the temporary impacts on noise from construction activities, the impact is considered potentially significant. This issue will be evaluated further in the EIR, based on the results of the noise and vibration analysis described above and applicable noise standards. The EIR will further evaluate potential impacts from excessive noise or groundborne vibration that may result from construction of the Project.

- c) Less than Significant.** Project construction activities will temporarily create an increase in ambient noise levels. Operation of the proposed Project would involve occasional maintenance activities, functional use of the spillway and intake and outlet structures, and possible operation of pumps and other equipment. Noise associated with these activities is currently occurring, and it is not expected that there would be any increase in noise levels over existing conditions. Operation of the new Pacheco Reservoir Pump Station will create a permanent increase in ambient noise levels at the Project site. However, the new pump station will be enclosed in a structure designed to reduce noise levels. The noise from the pump station would be primarily limited to the two residential facilities located south of the North Fork Dam and O'Connor Ranch. These structures would be partially shielded by rugged terrain; furthermore, it is anticipated that these properties would be acquired by SCVWD prior to Project operation commencing. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to permanent ambient noise levels that may result from construction and operation of the Project.
- d) Potentially Significant Impact.** During construction, there would be a temporary noise increase from the use of heavy equipment and blasting. Blasting would occur infrequently, and would only take place during daytime hours. Because the area around the proposed dam site is largely rural and open space, blasting noise is not expected to result in adverse effects on human health. However, the noise would be loud enough to briefly disturb daytime activities at the nearest homes. Blast noise could be audible in

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portions of Henry W. Coe State Park, particularly the ridgeline overlooking the Pacheco Reservoir. SCVWD would require the contractor to comply with all applicable noise and occupational safety standards, as defined in the construction specifications, and to protect workers and other persons from the health effects of increased noise levels from the use of construction equipment. Nonetheless, the impact is considered potentially significant. The EIR will further evaluate potential impacts to ambient noise levels that may result from construction of the Project

- e) **No Impact.** The Project is not located within an airport land use plan, and there are no public airports or public-use airports within two miles of the Project. The nearest public or public-use airport is the San Martin Airport, approximately 27 miles northeast of the Project area. Therefore, there would be no impact and the EIR will not evaluate the impacts related to airport land use plans.
- f) **No Impact.** There are no known private airstrips within two miles of the Project area. Therefore, there would be no impact and the EIR will not evaluate the impacts related to private airstrips.

2.4.13 Population and Housing

Table 2-14. Population and Housing Checklist

| XIII. POPULATION AND HOUSING: Would the project: | Potentially Significant Issues | Less Than Significant Impact | No Impact |
|--|---------------------------------------|-------------------------------------|------------------|
| a) Induce substantial growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | X | |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | X |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | X |

Environmental Setting

The proposed Project site is within the sphere of influence of unincorporated Santa Clara County. Pacheco Reservoir is located about 23 miles northeast of Gilroy and 2 miles north of State Route 152, as shown in Figure 1-1. The Project site is on land owned by PPWD and private parties. The area surrounding the proposed Project is rural and open space, primarily used for grazing. There are two residential properties located on Santa Clara County APN 898-49-001, one mile south of the North Fork Dam. There are also several structures identified as O'Connor Ranch (Santa Clara County APN 865-11-020) located along Pacheco Creek, approximately six miles up the canyon from the existing reservoir. O'Connor Ranch would be inundated by the expanded reservoir. It is anticipated that SCVWD would acquire these properties prior to Project construction commencing. There are also a number of associated support facilities below the existing dam and spillway.

Explanations for XIII. Population and Housing

a) **Less than Significant.** The proposed Project includes construction activities necessary to remove the North Fork Dam and to construct the new Pacheco Dam. Construction workers would be temporarily employed at the Project site, and these jobs would generally be anticipated to be filled by the local work force. No new long-term employment opportunities, or substantial population growth, would result from construction activities.

Changes in operation of Pacheco Reservoir would not result in an increase in employment opportunities that could lead to population growth. The Project increases the capacity of the existing reservoir, providing a more reliable water supply for SCVWD and other San Felipe Division contractors. The Project’s potential for increased population growth will be evaluated in the EIR. The impact is considered less than significant. The EIR will further evaluate potential impacts to population and other substantial growth that may result from construction of the Project

b, c) **No Impact.** There would not be substantial numbers of existing housing or people displaced by construction or operation of the proposed Project. Therefore, there is no impact and the EIR will not evaluate the impacts related to displacing substantial numbers of existing housing or people.

2.4.14 Public Services

Table 2-15. Public Services Checklist

| XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Fire protection? | | X | |
| b) Police protection? | | X | |
| c) Schools? | | | X |
| d) Parks? | | | X |
| e) Other public facilities? | | | X |

Environmental Setting

The Project site is located within the unincorporated area of Santa Clara County. Fire protection in the area is provided by the CalFire Pacheco Station, located about five miles west of the Reservoir on SR 152. The Santa Clara County Sheriff’s Office and California Highway Patrol would respond to the area in the event of safety or security situations.

The Pacheco Reservoir facilities are owned and operated by PPWD. The land surrounding the Reservoir is privately held, with the exception of Henry W. Coe State Park. Henry W. Coe State Park is the largest state park in Northern California at 87,000 acres. Several miles of Pacheco Creek run through the state park. In May of 2003, the SCVWD Board made a decision that the

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expansion of Pacheco Reservoir would not adversely impact Henry W. Coe State Park. Therefore, no parks or governmental or public facilities will be physically altered, constructed, expanded or otherwise affected by the proposed Project.

Explanations for XIV. Public Services

- a, b) Less than Significant Impact.** The movement of heavy and slow-moving construction equipment to the Project site may temporarily increase traffic along SR 152. In addition, there may be increased traffic along SR 152 from workers driving to the Project site. The increased traffic may impede or cause a reduction in the response time of fire, police, and other emergency response vehicle moving along SR 152. However, the impact is considered less than significant. The EIR will further evaluate potential impacts to fire and police protection response times that may result from construction of the Project
- c) No Impact.** The nearest school is Pacific Point Christian School, which is located approximately 19 miles southwest of the Project area at 2220 Pacheco Pass Highway in Gilroy. The Project would not impact existing school facilities nor would it contribute to any change in population or other land-use modifications that would impact the local school district. Therefore, there are no impacts associated with the need to expand any school facilities and the EIR will not evaluate the physical impacts related to schools.
- d) No Impact.** The Henry W. Coe State Park boundary is located 2,100 feet from the Reservoir; however, no part of the park will be inundated by the proposed Project. Pacheco State Park is located about 4.7 miles east of the Project area and will be unaffected by the proposed Project. Therefore, there will be no impacts associated with physical alteration or environmental degradation of parks and the EIR will not evaluate the physical impacts related to parks.
- e) No Impact.** There are no other public facilities in the proposed Project area. Therefore, there is no impact and the EIR will not evaluate the physical impacts related to public facilities, other than those listed in sections above.

2.4.15 Recreation

Table 2-16. Recreation Checklist

| XV. RECREATION: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | X |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | X |

Environmental Setting

At 87,000 acres, Henry W. Coe State Park is the largest state park in Northern California. The state park’s northern entrance is located about an hour southeast of the City of San Jose. The southern (Hunting Hollow) entrance is located just east of the City of Gilroy. Recreational uses in the park include: hiking, backpacking, camping, mountain biking, fishing and horseback riding. The state park is open year-round for hikers, mountain bikers, backpackers, equestrians, campers and picnickers. The Henry W. Coe State Park boundary is located 2,100 feet from the reservoir. No part of the park will be physically alternated or affected by the proposed Project.

The areas around Pacheco Reservoir are designated by the Santa Clara County General Plan as ranchlands (County of Santa Clara 1994). The South County Joint Area Plan states that the open spaces in South Santa Clara County should be preserved, maintained and considered for location of future regional parks. Moreover, the visual integrity of scenic gateways to the Pacheco Pass should be protected. However, land in the area of Pacheco Reservoir are primarily privately held and devoted to open space and ranchlands. Pacheco Reservoir itself does not support any recreational activities. Therefore, construction of the expanded Pacheco Reservoir would not impact any recreational uses in the Project area.

Explanations for XV. Recreation

- a) **No impact.** All proposed activities for the Project are outside of Henry W. Coe State Park. No views of the reservoir exist from any scenic overlooks, trails or roads within the park. The new dam and spillway would not be visible from trails or roads within the park, due to natural topography of the area. Small portions of the reservoir may be visible from locations on Kaiser-Aetna Road, which leads to the Dowdy Ranch Area and Visitor Center. However, it is not anticipated that the Project would increase the use of Henry W. Coe State Park or other regional recreational facilities.

Further analyses and studies may be conducted to determine whether it is feasible to provide recreational benefits at Pacheco Reservoir. However, at this time, there are no existing or planned recreational facilities in or around Pacheco Reservoir. If recreational facilities are incorporated into the Project, the EIR will evaluate the impacts related to increasing the use of regional parks or other recreational facilities.

- b) **No impact.** The proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities. Further analyses and studies may be conducted to determine whether it is feasible to provide recreational benefits at Pacheco Reservoir. However, at this time, there are no existing or planned recreational facilities in or around Pacheco Reservoir. If recreational facilities are incorporated into the Project, the EIR will evaluate the impacts related to the construction of expansion of recreational facilities.

2.4.16 Transportation and Traffic

Table 2-17. Transportation and Traffic Checklist

| | | | |
|---|---------------------------------------|-------------------------------------|------------------|
| XVI. TRANSPORTATION/TRAFFIC: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---------------------------------------|-------------------------------------|------------------|

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| | | | |
|---|---|---|---|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | X | | |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | X | | |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | X |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | X | |
| e) Result in inadequate emergency access? | | X | |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | X | | |

Environmental Setting

The Project area is within the unincorporated area of Santa Clara County, and would be subject to adopted policies and plans related to transportation and traffic. Level of service (LOS) is a way of measuring how well a road is operating, based on average control delay per vehicle, and in some analyses based on the ratio of the volume of traffic to the capacity of the road. LOS A is a free-flowing condition and LOS F is extreme congestion, with traffic volumes at or over capacity. The transportation element of the Santa Clara County General Plan (County of Santa Clara 1994) states that projects that will severely impact the transportation system should be required to mitigate the impacts, using transportation demand management and other transportation control measures. Transportation system management measures should be employed to ensure maximum operating efficiency of the existing system of roads and highways, including, but not limited to, the following: signal synchronization, signal pre-emptions for transit vehicles, ramp metering, traffic surveillance, and traffic advisory signs.

Roadways of particular relevance for the Project include: those that would be used during Project construction, those used as transportation routes to and from the Project site, and those that would be directly modified as part of the Project. In addition, it is anticipated that site access would include constructing new haul and access roads in conjunction with making improvement to existing roadways.

Vehicle use resulting from the Project would primarily occur on SR 152, also known as the Pacheco Pass Highway. SR 152 is a heavily traversed highway approximately 115 miles in length that links the San Joaquin Valley with the southern San Francisco Bay Area. SR 152 runs east and west from the City of Watsonville to Route 99 southeast of the City of Merced, going through the counties of Santa Cruz, San Benito, Santa Clara, Merced and Madera. The Transportation Element of the Santa Clara County General Plan (County of Santa Clara 1994) describes SR 152 as a busy highway and one of the scenic gateways in Santa Clara County.

The section of SR 152 from the Merced and Santa Clara County border to I-5 is designated as a scenic highway route.

SR 152 is built to rural standards, with direct at-grade access to the highway allowed for cross roads at various locations. Given the high-volumes and high speeds of vehicles that travel on this facility, at-grade crossings present a safety hazard. During the periods of peak usage, gaps in traffic adequate for a vehicle to turn to the highway and accelerate up to speed are limited.

Vehicles would access Pacheco Reservoir via the existing access road adjacent to SR 152. The existing access road would be improved and expanded as part of the proposed Project. In addition, a permanent haul road and access road and temporary access road would be constructed.

Explanations for XVI. Transportation and Traffic

a, b) Potentially Significant Impact. The proposed Project would not conflict with or prevent implementation of adopted plans, policies, or programs related to performance of circulation systems or programs supporting alternative transportation.

Construction activities would result in an increase in traffic in the Project area, which could exceed the capacity of some segments in the road network. Initial mobilization of the proposed Project, and import of materials from off-site locations, would result in heavy vehicles and equipment accessing the Project site via the existing and new access roads. Construction personnel, equipment, and materials would travel to the site via SR 152 and access roads. The proposed Project would result in increased traffic on SR 152, and could further degrade operation at roadway locations already operating at unacceptable LOS. However, the effect would be temporary. The issue is potentially significant. The EIR will further evaluate the effects to traffic.

Site access would also include constructing new haul and access roads in conjunction with making improvements to existing roadways. Details regarding access improvements would need to be coordinated with Caltrans.

Limited staging activities for construction of the pipeline would be established adjacent to the two single-family residential properties south of the reservoir Project area. All construction contractor parking would be located within the Project site.

The proposed Project would inundate a large section of an unnamed, unpaved road currently being used to access O'Connor Ranch, located upstream along Pacheco Creek. This road currently extends from SR 152 and runs north, adjacent to North Fork Pacheco Creek. Inundating this road will severely limit or completely eliminate access to some properties along the North Fork of the Creek. The effects of inundating this road will be evaluated further in the EIR.

Traffic patterns on and access to SR 152 would return to existing conditions upon Project completion. However, the transportation effects during Project construction (lasting approximately six years) would constitute a potentially significant issue that will be evaluated further in the EIR.

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- c) **No Impact.** The Project would not affect existing air-traffic patterns during construction. There would be no change in air-traffic patterns or air-safety risks. Therefore, there is not impact and the EIR will not evaluate the impacts related to air-traffic patterns.
- d) **Less than Significant Impact.** A 6-mile haul road and 1.7-mile permanent access road would be constructed for the Project. In addition, the existing access road would be improved, and a temporary .8-mile access road would be constructed. The reconstructed and new portions of the access road would provide at least the same traffic capacity as the existing section, and would likely result in a safer curve with improved lines of sight compared to existing conditions. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts from increased hazards due to design features that may result from construction of the Project
- e) **Less than Significant Impact.** Initial mobilization of the proposed Project, and import of Project materials from off-site locations, would result in heavy vehicles and equipment accessing the Project site via SR 152 and the existing access road. In addition, there may be increased traffic along SR 152 from workers driving to the Project site. The increased traffic may impede or cause a reduction in the response time of fire, police and other emergency response vehicles moving along SR 152.

In addition, the presence of large, slow-moving equipment driving past the two residential properties south of the reservoir may result in temporary safety hazards. It is unlikely that this scenario will interfere in the implementation of county emergency response or emergency evacuation plans. However, impacts to traffic will be temporary, and Project operation are not anticipated to increase traffic on SR 152 or the surrounding area. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to emergency access that may result from construction of the Project

- f) **Potentially Significant Impact.** Although bicycles are allowed along SR 152, the highway is not commonly used as a route for bicycling or pedestrian traffic. Santa Clara County is currently in the process of updating its Countywide Bicycle Plan. The 2000 Countywide Bicycle Plan identified 16 Cross-County Bicycle Corridors, including the *Hwy 152 Corridor* extending from the Santa Cruz County line to the Merced County line as a vehicle corridor (Santa Clara Valley Transportation Authority 2008). However, there are no existing or proposed bicycle trails or infrastructure along SR 152. The Santa Clara Valley Transit Authority has produced a bikeway map that rates bike paths and roadways within the region for bicycle travel. The bikeway map assigned SR 152 (east of Gilroy) a rating of “Extreme Caution.” The Merced County Regional Bicycle Transportation Plan identifies two proposed regional bikeway projects along SR 152 (Merced County Association of Governments 2008). The Project’s impact to these proposed bikeway projects would be further evaluated in the EIR.

Public Transit in the Project area is provided by Merced County and Santa Clara Valley Transit Authority. Several local and regional bus routes travel on SR 152 in the cities of Gilroy and Los Banos. Heavy and slow-moving construction equipment on SR 152 could decrease the performance and safety of these buses. Therefore, the impact is

considered potentially significant. The EIR will further evaluate potential impacts to public transit that may result from construction of the Project

2.4.17 Tribal Cultural Resources

Table 2-18. Tribal Cultural Resources Checklist

| XVII. TRIBAL CULTURAL RESOURCES: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|--|--------------------------------|------------------------------|-----------|
| a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | |
| i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | X | | |
| ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | X | | |

Environmental Setting

The Project is located in the southeast portion of Santa Clara Valley along Pacheco Creek. Archaeological evidence for the South Santa Clara Valley suggests that it has been inhabited for at least 4,200 years. Until about 2,500 years ago, populations were non-permanent, and seasonally moved out of the South Santa Clara Valley to take advantage of resources in coastal and inland California. Pacheco Pass was used a passage to the coast, primarily by the Costanoan Indians, of Ohlone.

The Ohlones extended from coastal San Francisco, south past Carmel and about 60 miles inland. At least two separate groups, the Ausaimas and the Uñijaimas, held the valley portions of the Pajaro River, where Pacheco Creek is a tributary. The Ausaimas occupied the Bolsa—including the San Felipe Lake area—Tequisquita Slough, and lower Pacheco Creek. The Uñijaimas lived along the western edge of south Santa Clara Valley, and the foothills north, from the Pajaro River up toward modern Gilroy. In the Bolsa/Pacheco Creek area was a large Ausaima village, Poitoquix, located in the general vicinity of Dunneville (possibly on the south bank of Pacheco Creek or north bank of Tequisquita Slough (Santa Clara Valley Water District 2008). The immediate vicinity of Pacheco Pass and Los Banos Creek was occupied by Kawatchwa Yokuts.

Assembly Bill 52, approved in September 2014, and effective July 2015, establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources, as defined by Public Resources Code Section 21074, as

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part of CEQA. AB 52 applies to projects that file for a Notice of Preparation or Notice of Negative Declaration/Mitigated Negative Declaration on or after July 1, 2015. Lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the tribe has submitted written request to be notified. The tribe must respond to the lead agency within 30 days of the receipt of notification if it wishes to engage in consultation on the project. The lead agency must begin the consultation process within 30 days of receiving the request for consultation.

The California Native American Heritage Commission has provided a consultation list of tribes with traditional lands or cultural places located within the boundaries of the Project area (Exhibit 13). In compliance with AB 52, SCVWD will notify all applicable tribes, and SCVWD will participate in any requested consultation.

Explanations for XVII. Tribal Cultural Resources

a.i) Potentially Significant Impact. There is the potential that tribal cultural resources listed in the California Register of Historic Places or a local register of historical resources could be located in the Project area. The exact age and potential significance of structures in the Project area is unknown. Project construction activities and the inundation of an expanded Pacheco Reservoir could damage or destroy any such resources. SCVWD will conduct further surveys as part of the EIR to determine the eligibility of the structures in the Project area as historic tribal resources. The impact is considered potentially significant. The EIR will further evaluate potential impacts to tribal historical resources that may result from construction of the Project.

a.ii) Potentially Significant Impact. Project construction activities would be limited to the area around Pacheco Reservoir, up to SR 152. Construction activities will include: grading; material excavation; clearing, grubbing, stripping and disposing of topsoil; blasting of hard fractured rock; and other activities that would disturb the soil in the Project area. Project construction would require excavation to previously undisturbed depths. The Environmental Setting section above describes the historical presence of tribes in the Pacheco Pass area. The potential exists for the Project to impact significant Tribal Cultural Resources, as defined by Public Resources Code Section 5024.1. Therefore, the impact is considered potentially significant. Further surveys and analysis of the topic will be provided in the EIR. The EIR will further evaluate potential impacts to significant tribal resources that may result from construction of the Project

2.4.18 Utilities and Service Systems

Table 2-19. Utilities and Service Systems Checklist

| XVIII. UTILITES AND SERVICE SYSTEMS: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---------------------------------------|-------------------------------------|------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | X |

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| XVIII. UTILITES AND SERVICE SYSTEMS: Would the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|------------------|
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | X | |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | X |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | X | |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | X |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | X | | |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | | X | |

Environmental Setting

SCVWD manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 1.8 million residents (County of Santa Clara 2013, Santa Clara Valley Water District 2017). SCVWD manages 10 dams and surface water reservoirs, three water treatment plants, and more than 275 miles of streams (Santa Clara Valley Water District 2017).

The North Fork Dam, which creates Pacheco Reservoir, was completed in 1939, and retains approximately 5.5 TAF of water. The North Fork Dam and existing Reservoir are owned and operated by PPWD. Water stored in Pacheco Reservoir comes from Pacheco Creek.

No established facilities exist at Pacheco Reservoir that require wastewater service. Residents in the area of the Reservoir rely on septic systems for wastewater needs. There is also no established stormwater infrastructure at the Reservoir. Stormwater runoff around the dam and Reservoir facilities absorbs into the ground, and it is not collected by any established drains or collectors.

The South Valley Recology facility in Gilroy has the capacity to accept Class A debris (such as construction debris). Some debris may also be brought to the John Smith Landfill in Hollister. There is currently no pick-up service for residents in the Pacheco Reservoir area.

Gas and electricity service in the Project area is provided by PG&E, who provides natural gas and electricity to approximately 13 million people through a 70,000 square-mile service area in Northern and Central California. One 70 kV PG&E transmission line, originating from a substation in Los Banos, exists in the vicinity of the proposed pump station site. The

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transmission line would need to be upgraded to support the additional load required by the new pump station.

Non-SCVWD-owned utilities, above or below ground, may be present within the Project site and would have to be relocated; a detailed survey for locations of existing utilities would be completed prior to construction.

Explanations for XVIII. Utilities and Service Systems

a, c, e) No Impact. During Project construction, portable toilets would be provided at the construction site, and wastewater generated from construction employees would be disposed of at the South County Regional Wastewater Authority wastewater treatment plant. The Project would comply with all state, RWCQB, and local requirements related to the disposal of sewage, and daily wastewater generated at the construction site would not exceed wastewater treatment requirements. Additionally, the Project would not result in the generation of additional wastewater requiring treatment and disposal. No new or expanded waste water facilities would result from the proposed Project.

The Project has no impacts associated with wastewater treatment requirements, no impact on new wastewater facilities, no impact on water entitlements, and no impact on wastewater treatment demands. The EIR will not evaluate impacts related to wastewater treatment or new storm water drainage facilities.

b) Less than Significant Impact. Project construction will not result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. However, operation of the expanded Pacheco Reservoir would increase water supply reliability in drier water years. This is not anticipated to result in the construction of new water or wastewater treatment facilities. However, it could potentially increase the use of water treatment and wastewater treatment facilities during drier years, when there may be underutilized capacity under existing conditions. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to new water or wastewater facilities that may result from construction of the Project

d) Less than Significant Impact. The proposed total storage for the new reservoir is 141.6 TAF, with an active storage of 140.8 TAF, giving an increase of 134 TAF of active storage. Currently, water captured in Pacheco Reservoir is from natural runoff from the local watershed. The Project would be filled using a combination of 1) natural hydrology within the North Fork Pacheco Creek basin, including the East Fork, and 2) by SCVWD-owned water from San Luis Reservoir under a CVP contract.

Project construction would not require new or expanded entitlements. Operation of the expanded reservoir will require a combination application/petition from the State Board for the proposed new structures, and a new water right and change in use. The change in use for Pacheco Reservoir will include adding fish preservation and enhancement. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts from new water entitlements that may result from construction of the Project.

- f) **Potentially Significant Impact.** Construction of the Project would produce solid waste associated with the various construction activities. Excavation at the embankments would result in waste rockfill that would require permanent disposal. Overburden material may also be used for haul road development and for the dam crest raise. Spoils disposed in these locations would remain permanently. As necessary, these sites would be treated with erosion controls and vegetated upon Project completion.

Waste generated from site demolition and modifications could include concrete rubble, asphalt, building components from the demolition of inlet/outlet facilities, and portions of the spillway. The majority of waste generated from site demolition and modifications would be recycled at a concrete or asphalt batching facility. Additional solid waste generated from construction and contractor activities that cannot be recycled would be transported to a permitted solid waste facility. The generated waste is likely to be relatively small, but has not been quantified, nor has a solid waste facility been identified at this time. Therefore, the potential exists that waste generated by the Project could cause the solid waste facility to exceed the maximum daily disposal limits and the impact is considered potentially significant. Project operation would not generate new solid waste. Impacts on solid waste disposal during construction could be significant, and will therefore be evaluated further in the EIR. The EIR will further evaluate potential impacts to local landfills and federal, state and local statutes and regulations related to solid waste that may result from construction of the Project.

- g) **Less than Significant Impact.** As described above, construction of the Project would produce solid waste associated with the various construction activities. A majority of the waste generated from site demolition and modifications would be recycled at a concrete asphalt batching facility. Additional solid waste generated from construction and contractor activities that cannot be recycled would be transported to a permitted solid waste facility. The generated waste is likely to be relatively small, but has not been quantified, nor has a solid waste facility been identified at this time. The SCVWD will comply with all applicable federal, state and local laws and regulations related to solid waste. Therefore, the impact is considered less than significant.

2.4.19 Mandatory Findings of Significance

Table 2-20. Mandatory Findings of Significance Checklist

| XIX. MANDATORY FINDINGS OF SIGNIFICANCE: Does the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|--------------------------------|------------------------------|-----------|
| a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | X | | |

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| XIX. MANDATORY FINDINGS OF SIGNIFICANCE: Does the project: | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---------------------------------------|-------------------------------------|------------------|
| b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.) | X | | |
| c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | X | | |

Explanations

a) Potentially Significant Impact. Construction activities of the proposed Project could potentially have significant impacts on air quality, agricultural and forestry resources, biological resources— including special-status plant and animal species, cultural resources, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use/planning, noise, transportation/traffic, tribal cultural resources, and utilities.

Proposed Project operation could potentially have significant impacts on biological resources and hydrology/water quality.

These issues have the potential to degrade the quality of the environment for fish species, wildlife species and plant communities. Therefore, the impact is considered potentially significant. These issues will be further explored in the EIR.

b) Potentially Significant Impact. As defined by the State of California, cumulative impacts reflect “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (CEQA Guidelines, § 15355[b]).

The degree to which Project effects would contribute to a significant cumulative impact will be evaluated in the EIR. To meet the adequacy standard established by the CEQA Guidelines Section 15130, the EIR will identify past, present, and reasonably probable future projects producing related or cumulative impacts. Other projects or plans in the geographic scope of the proposed Project area may include projects in the Pajaro River watershed, including Pacheco Creek; San Clara County; and San Benito County.

c) Potentially Significant Impact. Construction activities of the proposed Project could potentially have significant impacts on air quality, agricultural and forestry resources, biological resources including— special-status plant and animal species, cultural resources, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use/planning, noise, transportation/traffic, tribal cultural resources, and utilities.

Proposed Project operation could potentially have significant impacts on biological resources and hydrology/water quality.

After completion, the proposed Project would substantially benefit people by providing increased water supply reliability and protection against flooding impacts. However, the Project construction could potentially have both direct and indirect adverse effects on human beings. Therefore, impact is considered potentially significant. These issues will be further explored in the EIR.

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CHAPTER 3 LIST OF INITIAL STUDY PREPARERS

3.1 Santa Clara Valley Water District

| | |
|--------------------|---|
| Erin Baker | Reviewer; Engineering Manager |
| Rita Chan | Reviewer; Assistant Counsel |
| Jerry De La Piedra | Reviewer; Acting Deputy Operating Officer |
| Tiffany Hernandez | Reviewer; Environmental Planner |
| Kathleen Low | Reviewer; Assistant Engineer II (Civil) |
| Melih Ozbilgin | Reviewer; Senior Water Resources Specialist |

3.2 Stantec

| | |
|-----------------|-------------------------------|
| Eric Clyde | Civil Engineer |
| Danielle Davis | Environmental Engineer |
| Martina Gelo | Civil Engineer |
| Jim Herbert | Geologist |
| Steve Irving | GIS Specialist |
| Vic Iso-Ahola | Civil Engineer |
| Cynthia Jones | Biologist |
| Mary Paasch | Water Resources Engineer |
| Meredith Parkin | Environmental Scientist |
| Joshua Peabody | Cultural Resources Specialist |
| Danelle Pecot | Civil Engineer |
| Kirsten Pringle | Environmental Planner |
| Paul Marshall | Civil Engineer |

Chapter 3 – List of Initial Study Preparers

| | |
|-----------------|---------------------------|
| Craig Moyle | Public Affairs Specialist |
| Neil Stewart | Water Resources Engineer |
| Stephanie Theis | Fisheries Biologist |

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CHAPTER 4 REFERENCES

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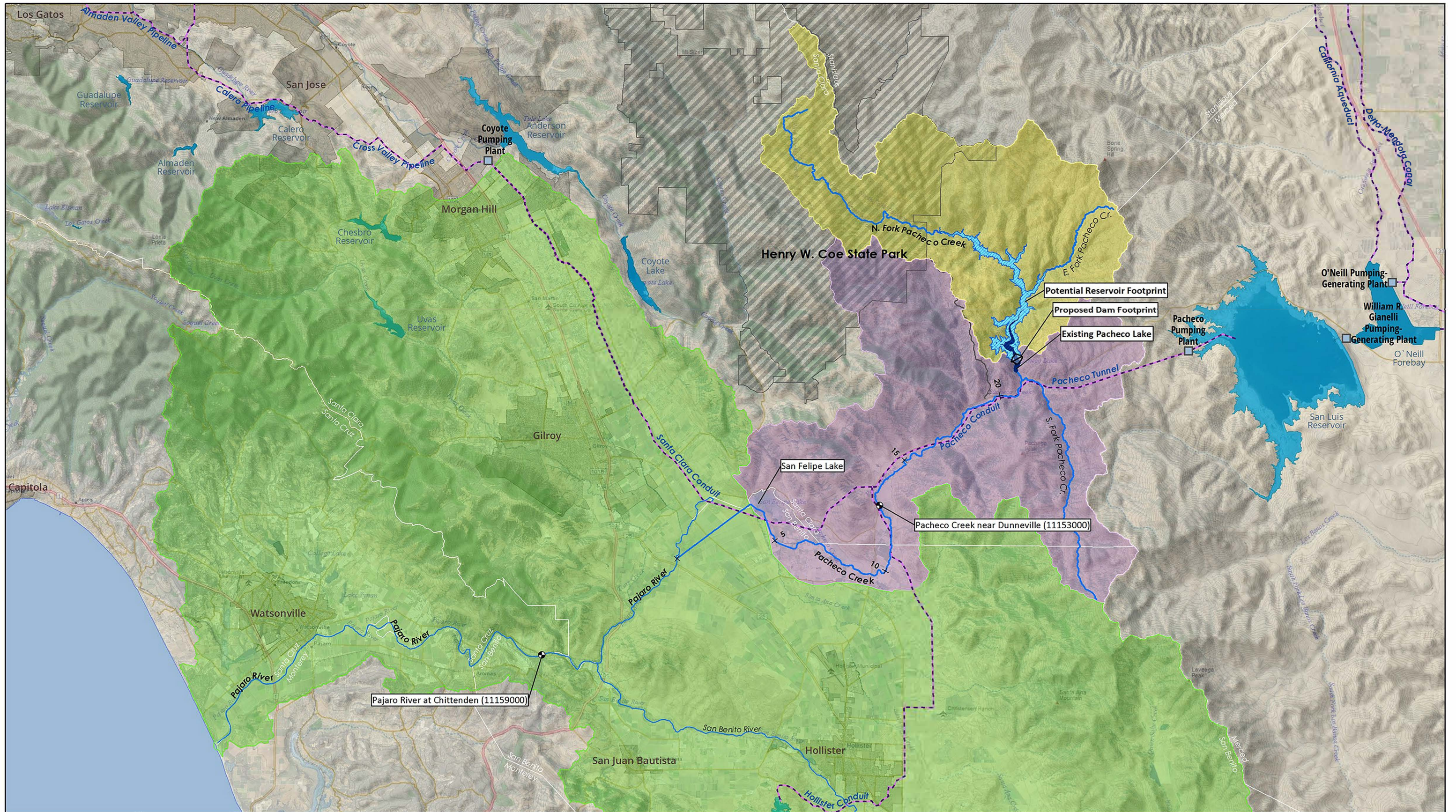
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Pacheco Reservoir Expansion Project Initial Study and NOP Exhibits



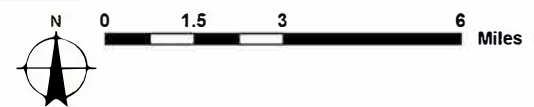


Santa Clara Valley
Water District



- Selected USGS Gage Station
- Existing Pump Station
- Existing Tunnel/Pipeline

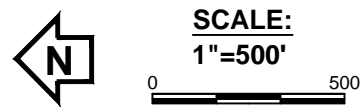
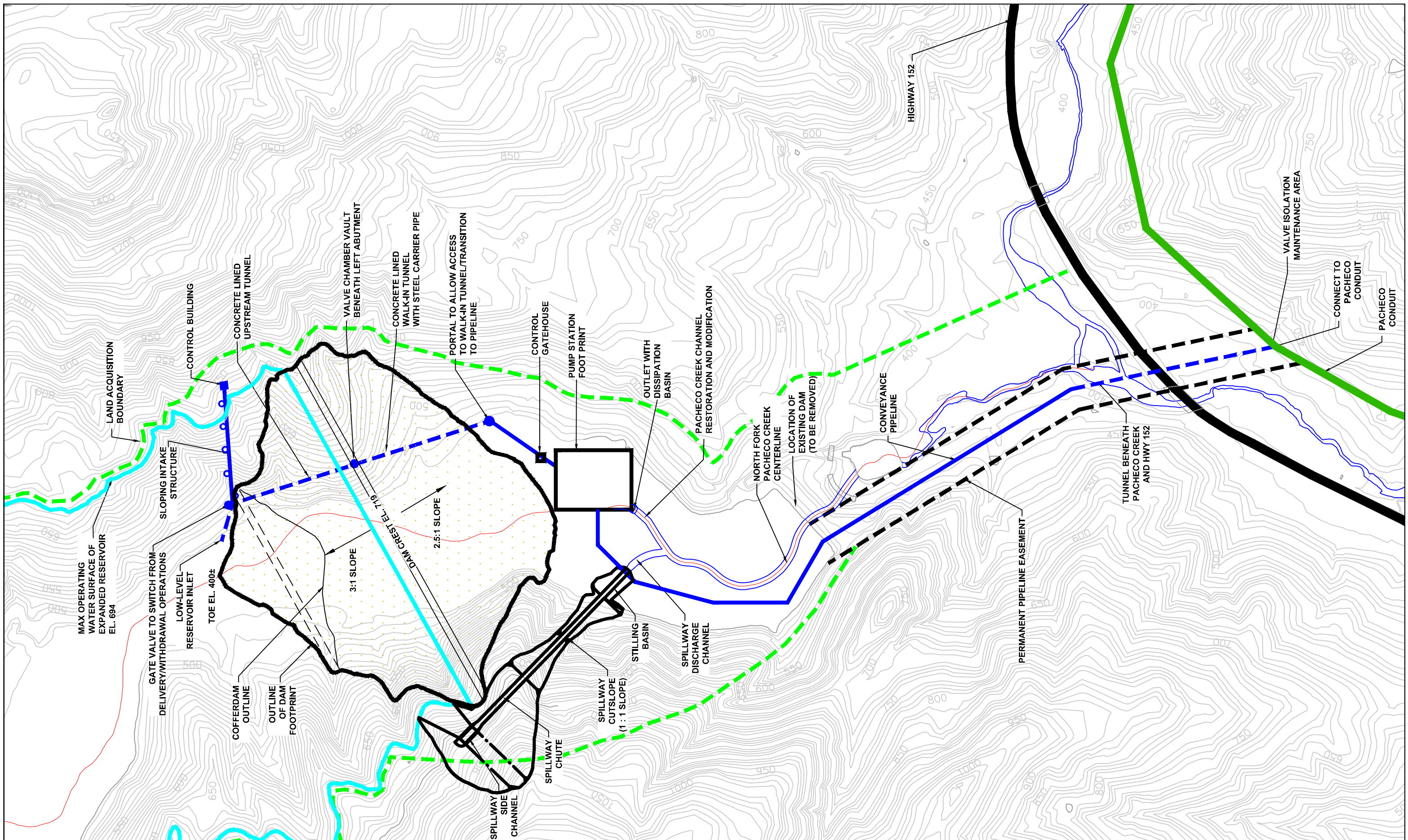
- Affected Watersheds**
- Pajaro River below Pacheco Creek
(Includes San Benito River Shed - not shown in its entirety)
 - Pacheco Creek below Proposed Dam
 - North Fork Pacheco Creek above Proposed Dam



Prepared: July, 2017
 Projection: CA SP III NAD83
 Background: DeLorme (Copyright © 2015)
 G:\SCVWD\1 MXDs\ Reports\Prop1\Project Overview_20170725.mxd

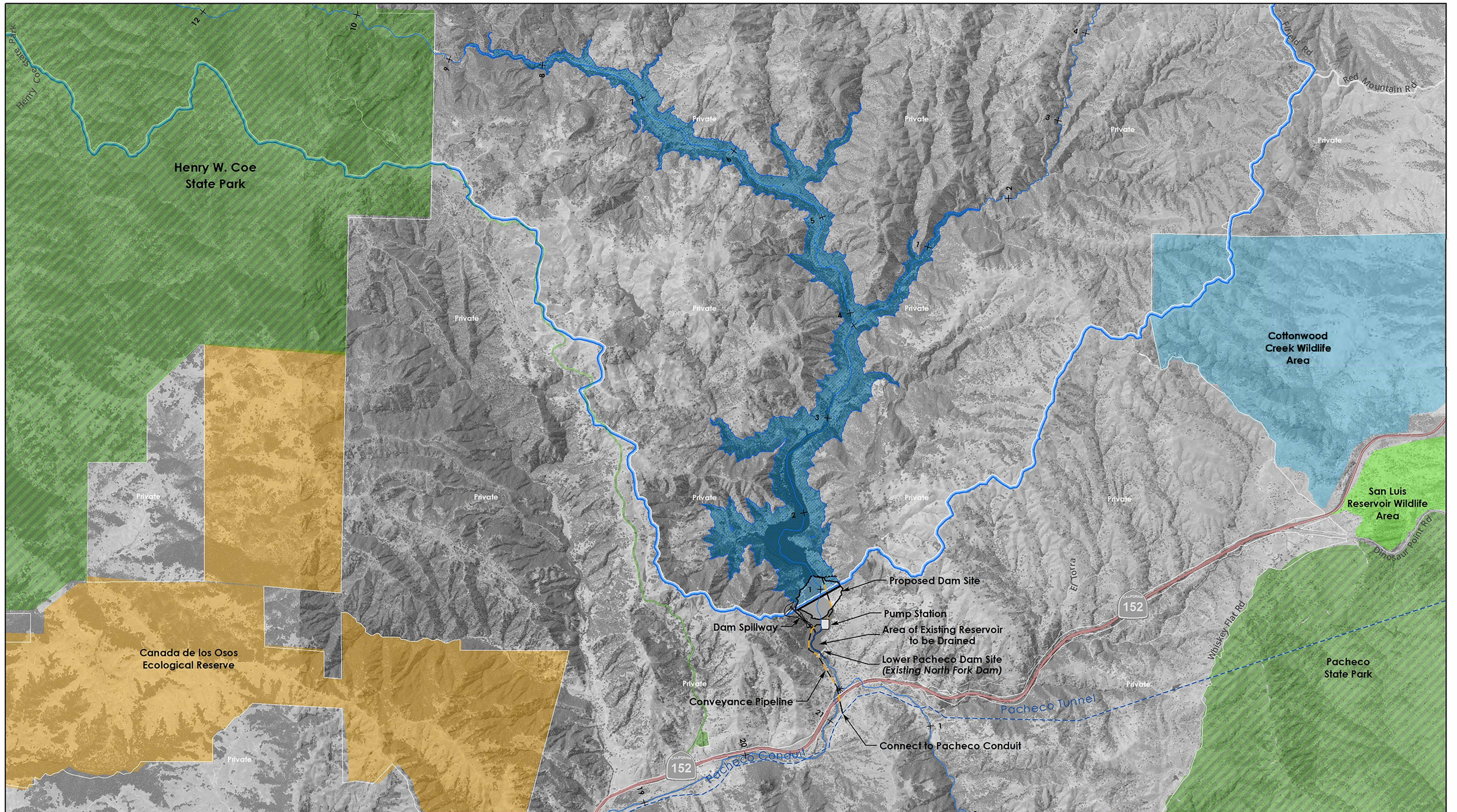
Exhibit 1

PROJECT GEOGRAPHIC OVERVIEW
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017



- MAX. WATER SURFACE ELEVATION OF 694 FT
- LAND ACQUISITION BOUNDARY
- PERMANENT PIPELINE EASEMENT BOUNDARY
- EXISTING PACHECO CONDUIT
- PACHECO AND NORTH FORK PACHECO CREEK
- PACHECO AND NORTH FORK PACHECO CREEK

Exhibit 2
PROJECT SITE FEATURES
 PACHECO RESERVOIR EXPANSION
 PROJECT AUGUST 2017



Santa Clara Valley
Water District



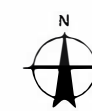
--- Existing
Tunnel/Pipeline
--- Proposed
Tunnel/Pipeline

▭ Proposed Dam Footprint
▨ Potential Reservoir Footprint
▭ Proposed Dam Contributing Watershed

▭ Private Parcel

State Lands

- ▭ State Park
- ▭ Canada de los Osos Ecological Reserve
- ▭ Cottonwood Creek Wildlife Area
- ▭ San Luis Reservoir Wildlife Area



0 2,000 4,000 6,000 Feet

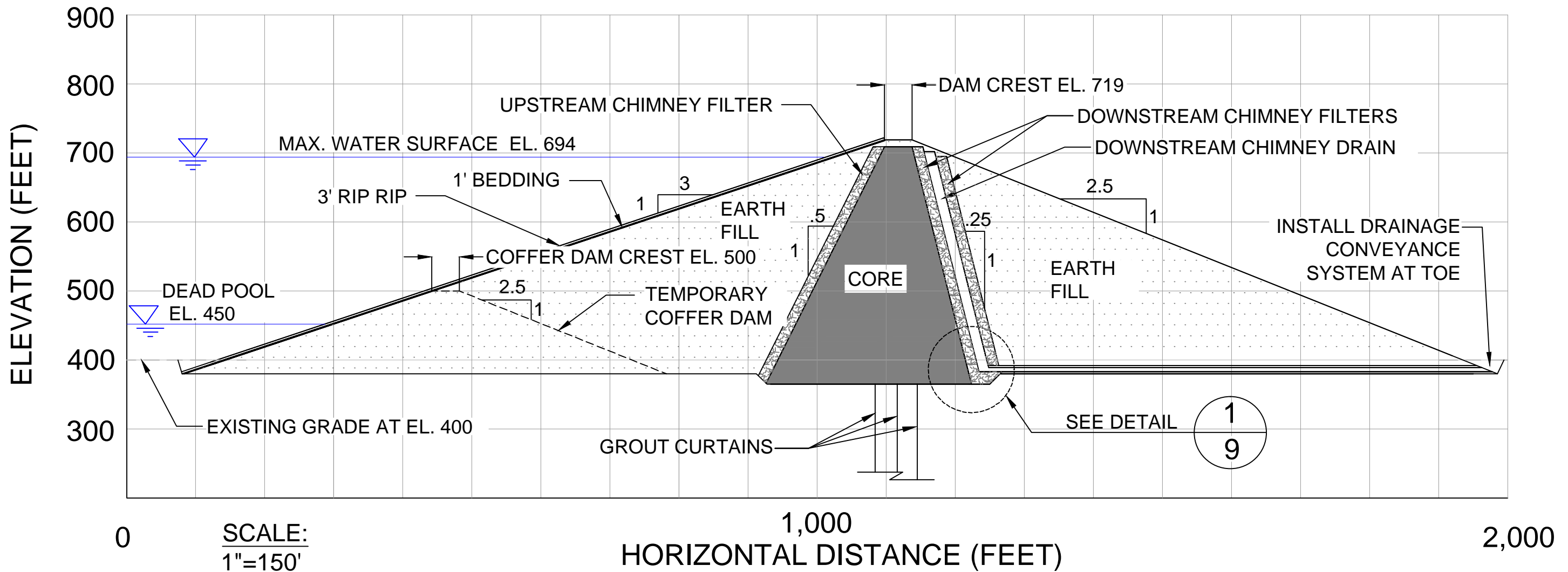
Prepared: July, 2017
Projection: UTM Zone 10 NAD83
Parcel Data: Santa Clara Co. Assessor (2014)
Cons. Easement: TNC (2017)
State Lands: CaSIL (2016)
Background: NAIP (2016)

G:\SCVWD\1 MXDs\ Reports\Prop1\ReservoirArea_AltA_20170725.mxd

Exhibit 3

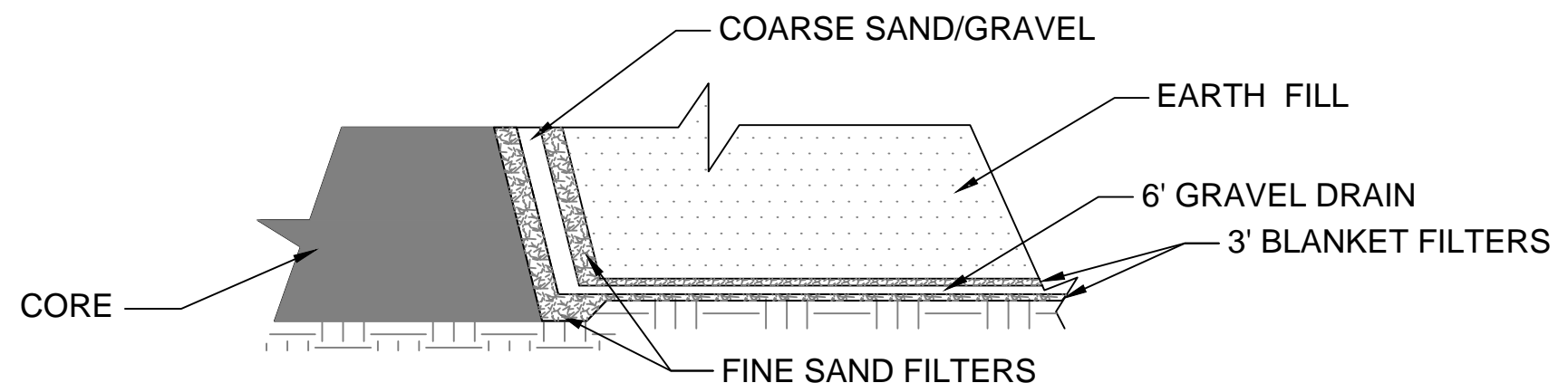
RESERVOIR PLAN VIEW

**PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017**

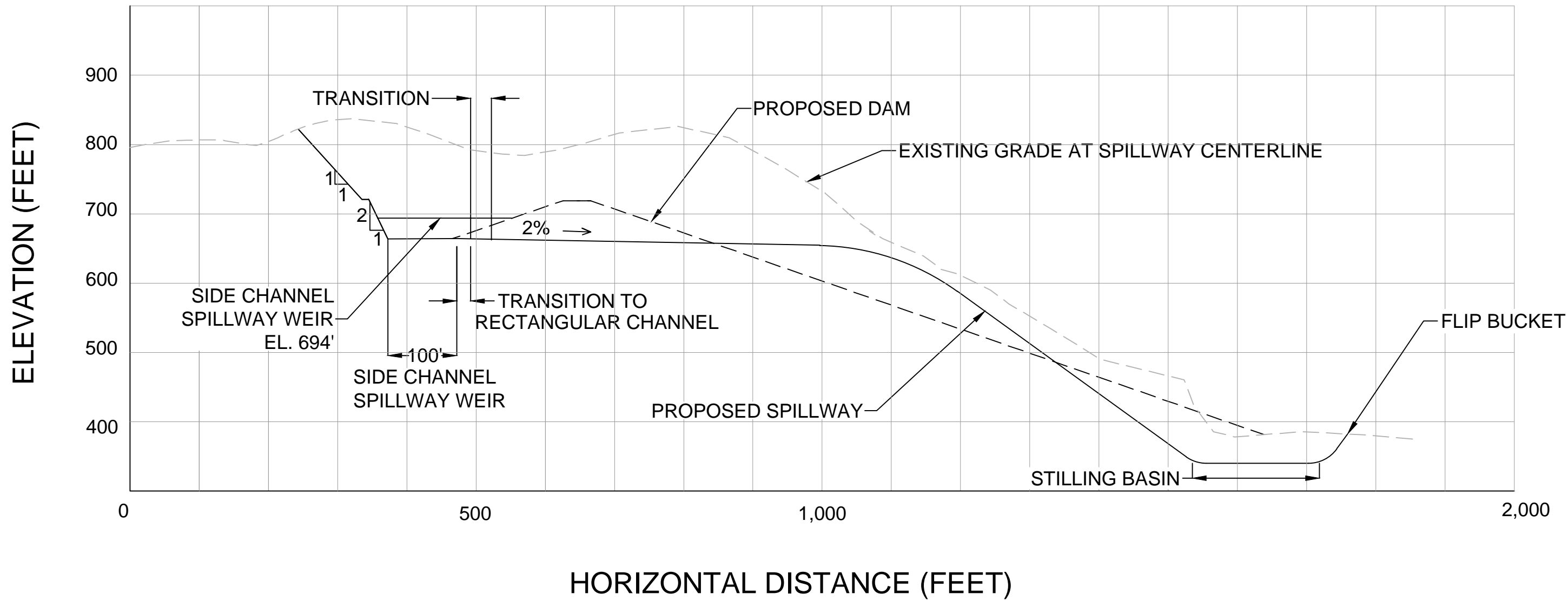


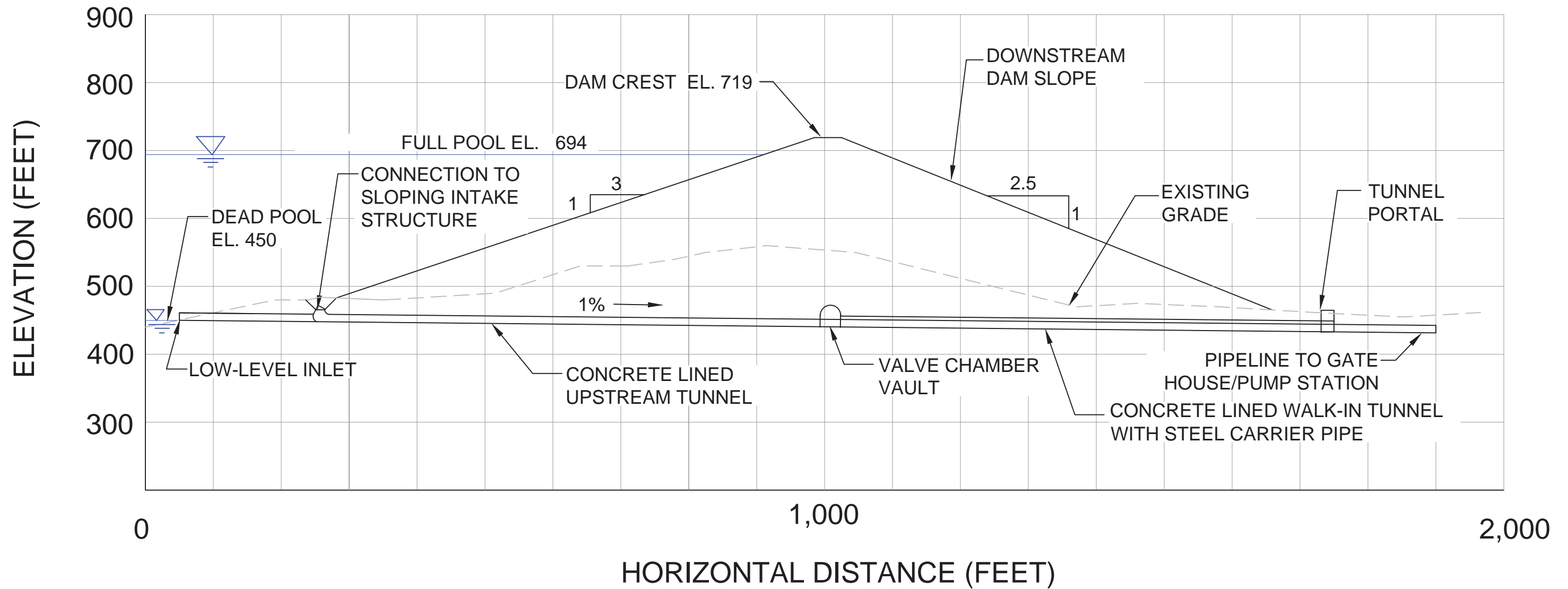
SCALE:
1"=150'

CROSS SECTION OF ZONED DAM EMBANKMENT



DETAIL 1/9
NTS





PROFILE - OUTLET TUNNEL



SCALE:
1"=150'
0 75 150



Exhibit 6

OUTLET TUNNEL PROFILE
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017

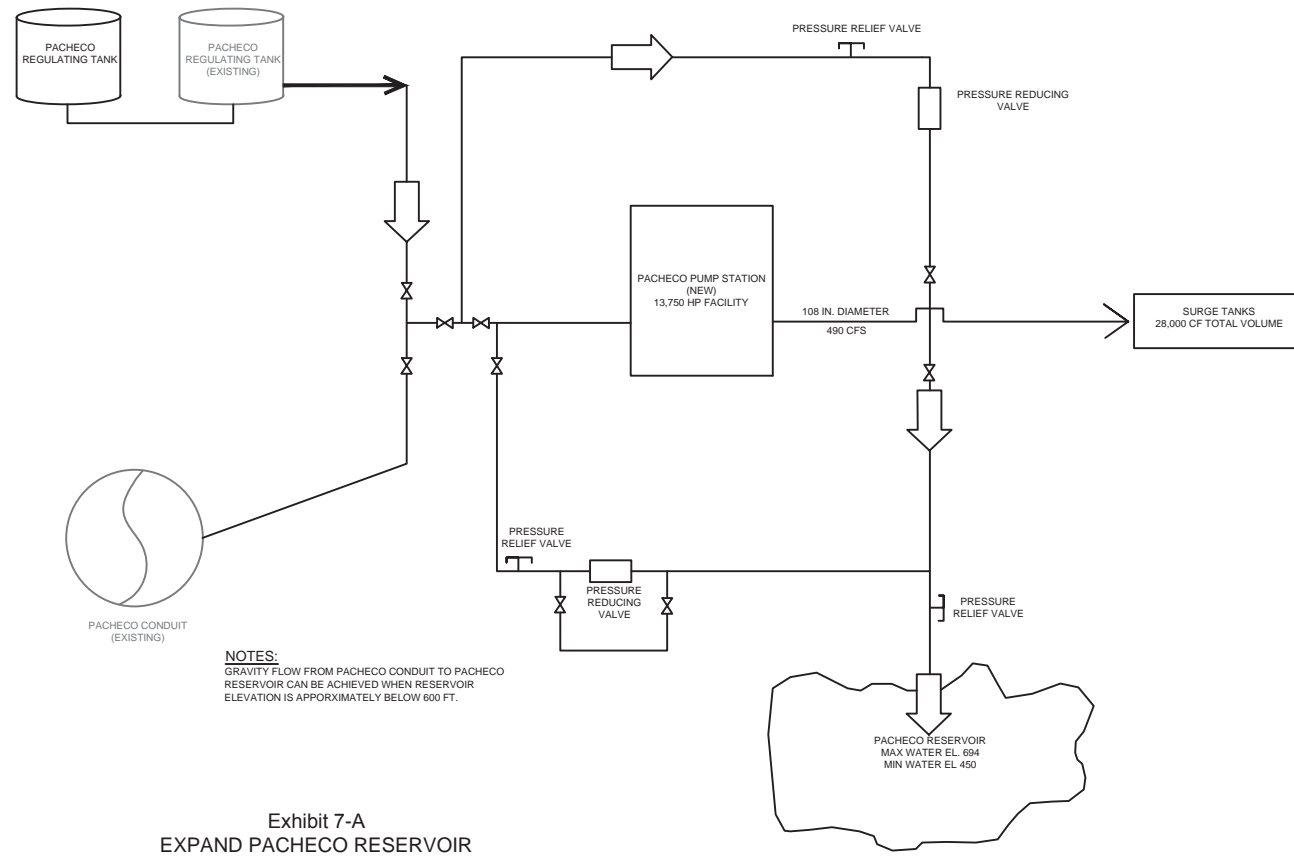


Exhibit 7-A
EXPAND PACHECO RESERVOIR
GRAVITY FLOW TO PACHECO RESERVOIR FLOW SCHEMATIC

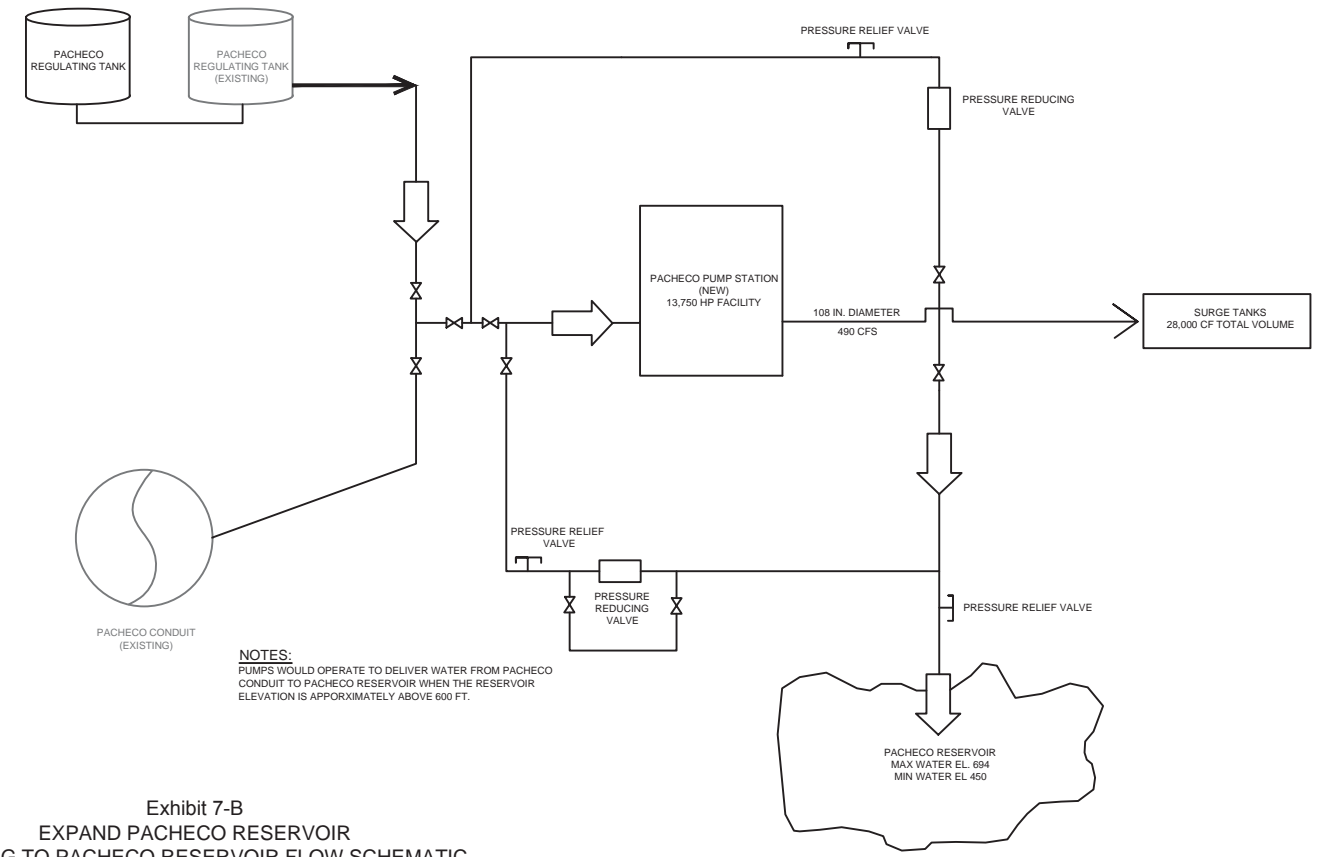


Exhibit 7-B
EXPAND PACHECO RESERVOIR
PUMPING TO PACHECO RESERVOIR FLOW SCHEMATIC

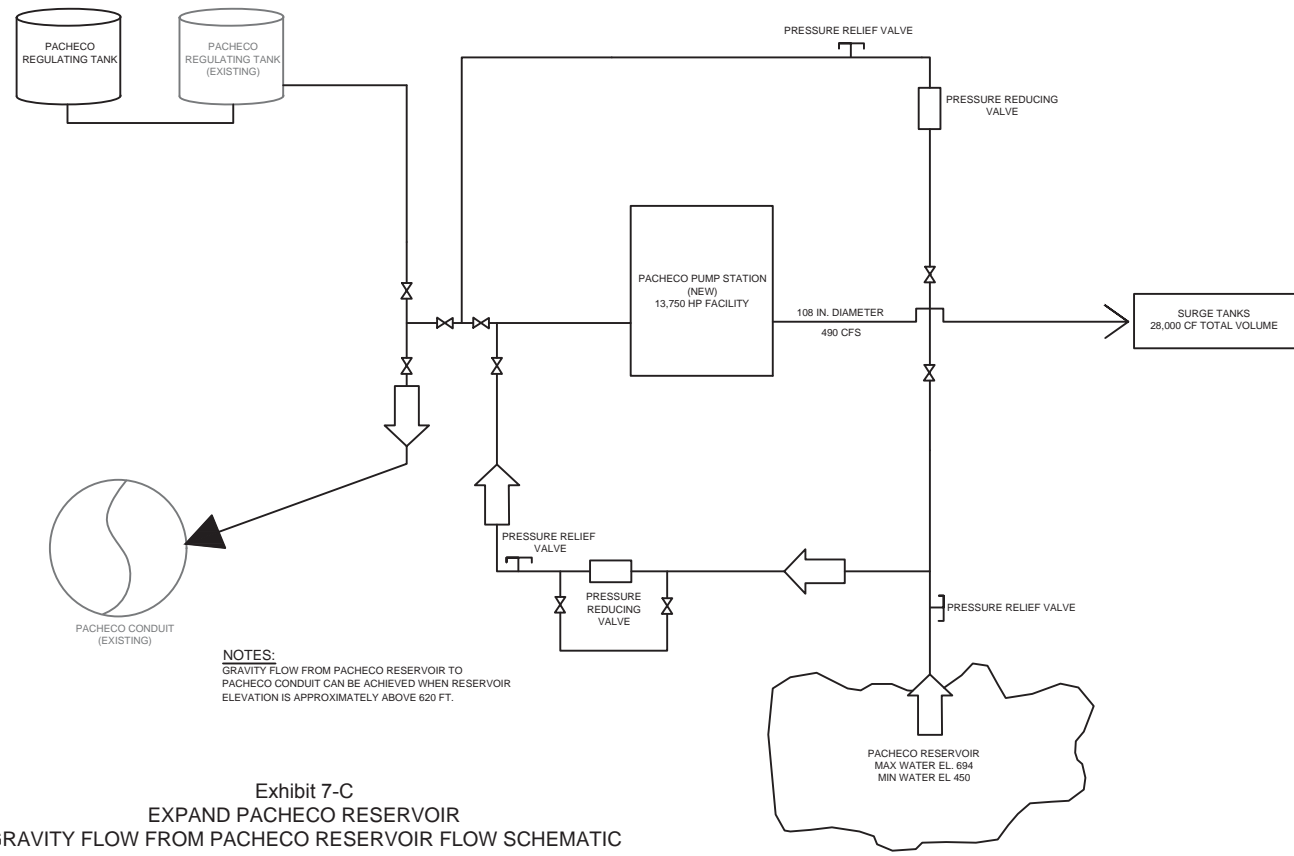


Exhibit 7-C
EXPAND PACHECO RESERVOIR
GRAVITY FLOW FROM PACHECO RESERVOIR FLOW SCHEMATIC

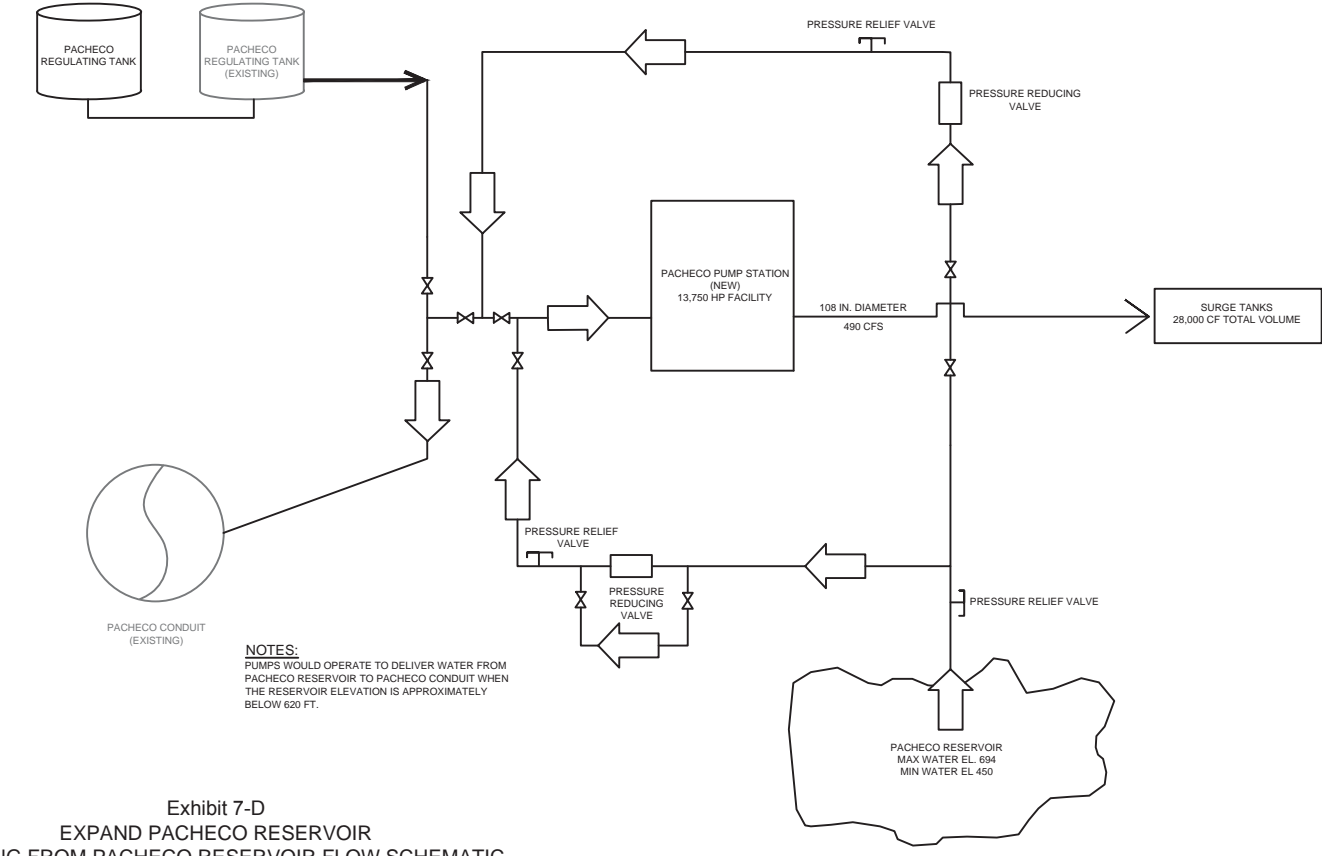
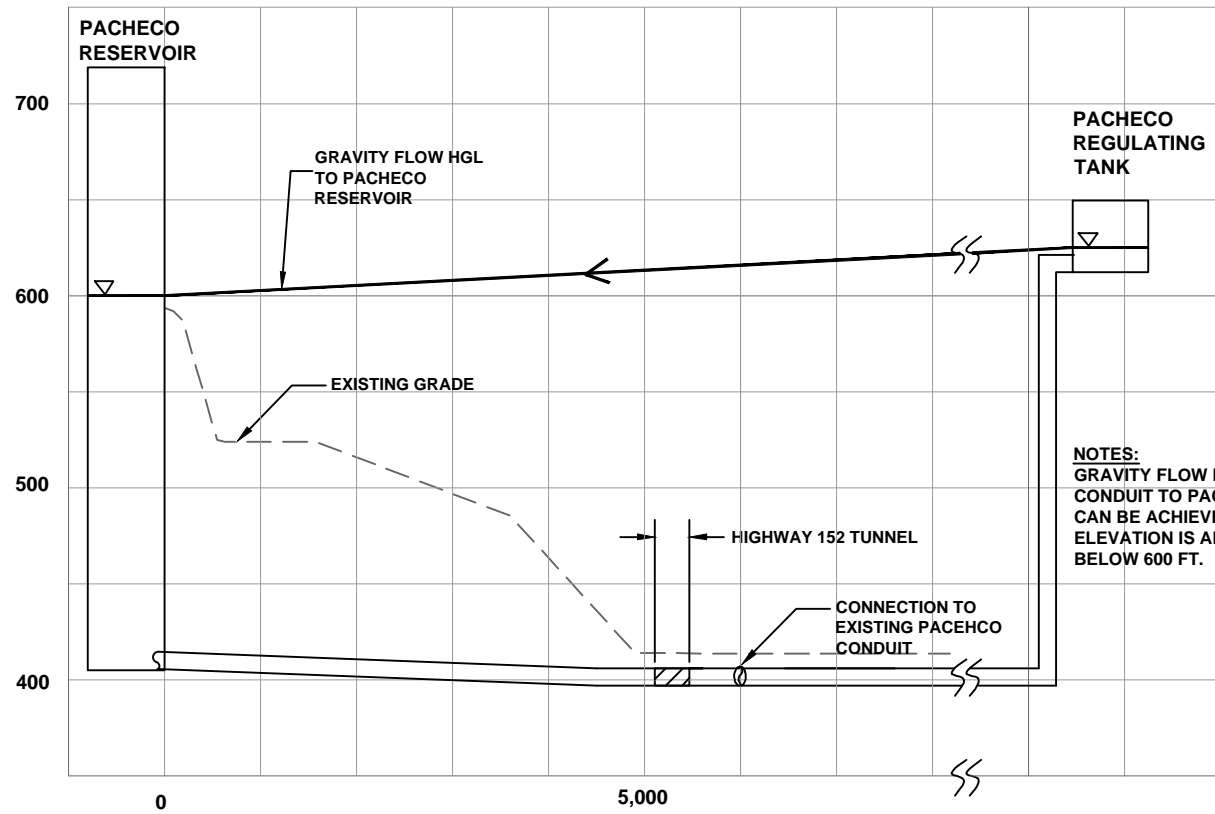
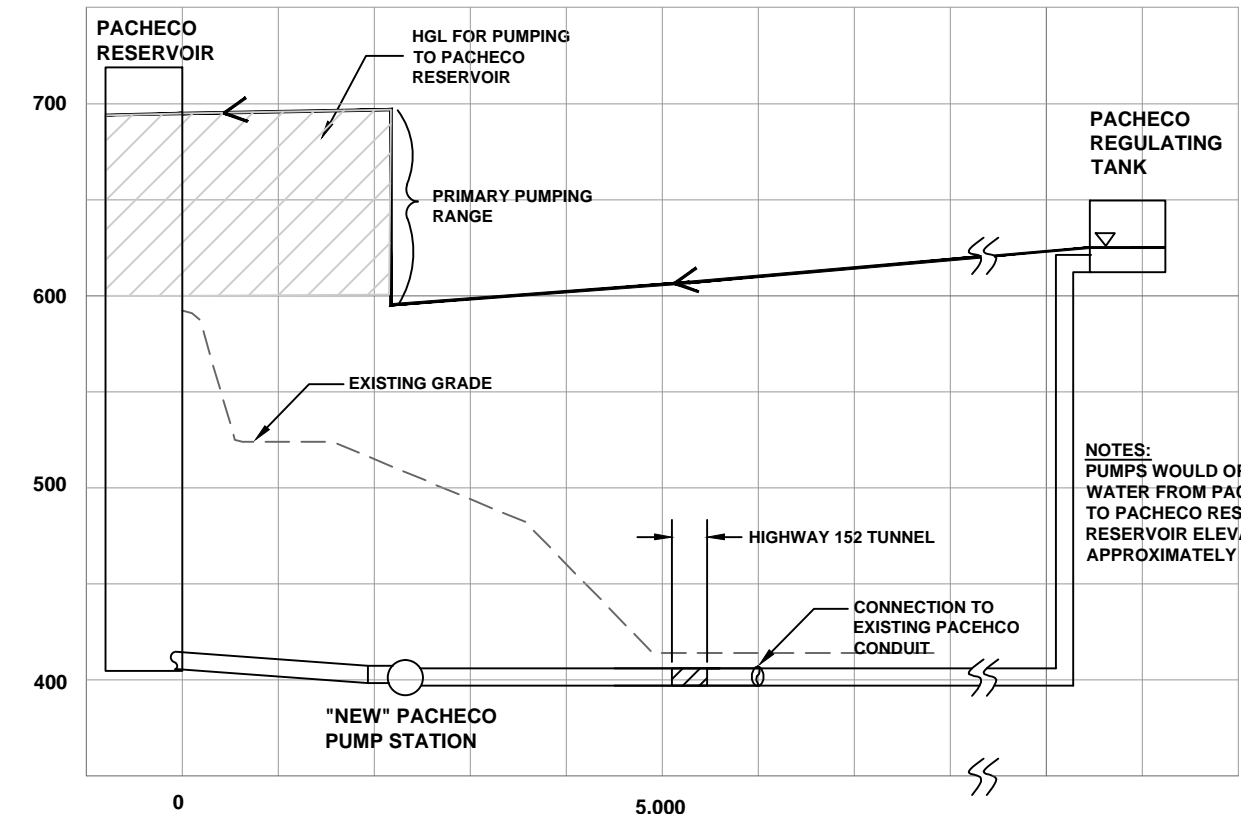


Exhibit 7-D
EXPAND PACHECO RESERVOIR
PUMPING FROM PACHECO RESERVOIR FLOW SCHEMATIC



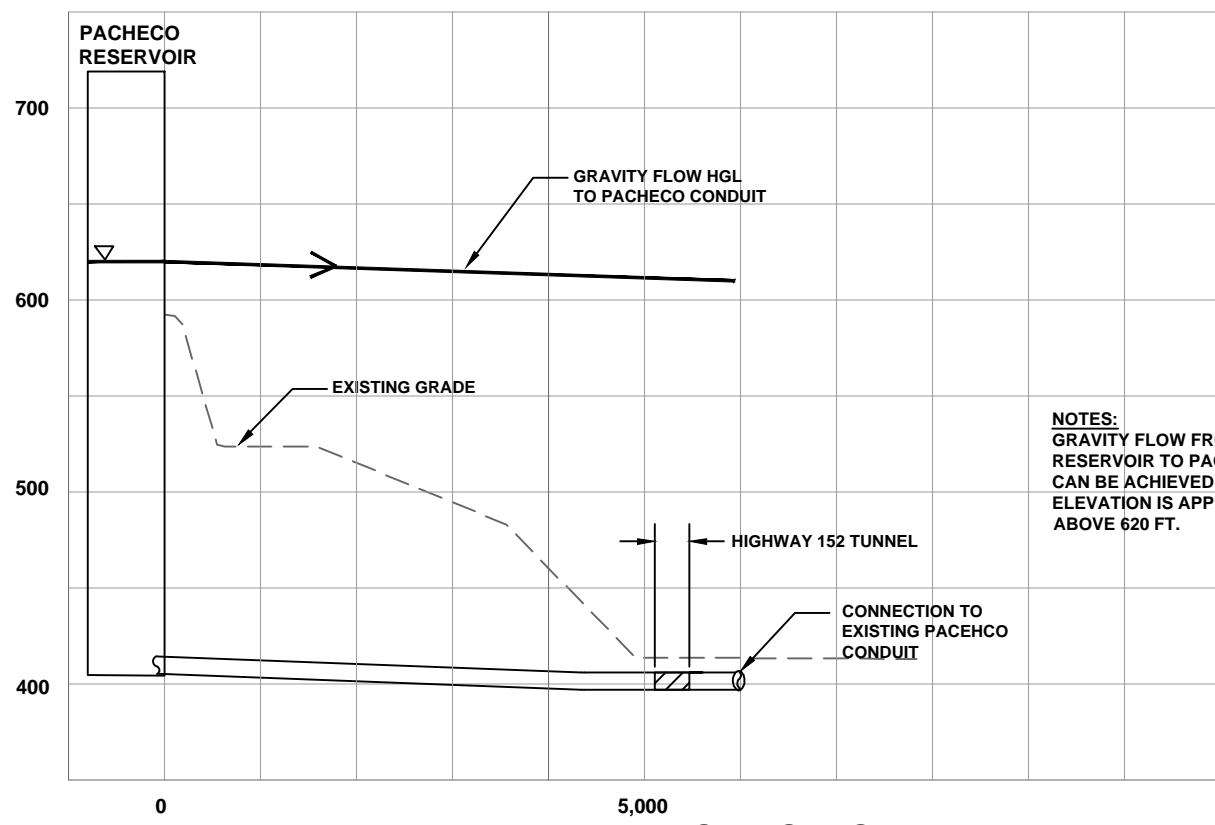
NOTES:
GRAVITY FLOW FROM PACHECO CONDUIT TO PACHECO RESERVOIR CAN BE ACHIEVED WHEN RESERVOIR ELEVATION IS APPROXIMATELY BELOW 600 FT.

GRAVITY FLOW TO PACHECO RESERVOIR



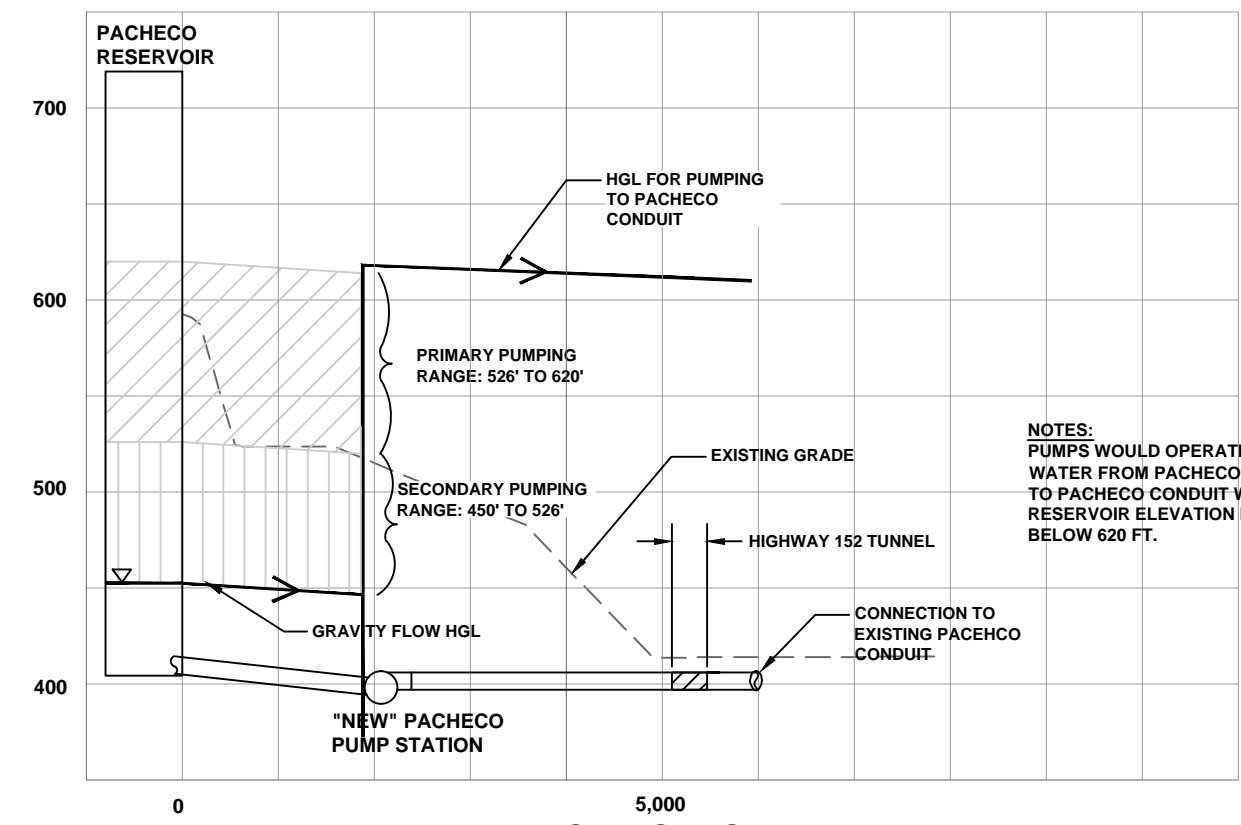
NOTES:
PUMPS WOULD OPERATE TO DELIVER WATER FROM PACHECO CONDUIT TO PACHECO RESERVOIR WHEN THE RESERVOIR ELEVATION IS APPROXIMATELY ABOVE 600 FT.

PUMP TO PACHECO RESERVOIR



NOTES:
GRAVITY FLOW FROM PACHECO RESERVOIR TO PACHECO CONDUIT CAN BE ACHIEVED WHEN RESERVOIR ELEVATION IS APPROXIMATELY ABOVE 620 FT.

GRAVITY FLOW TO PACHECO CONDUIT



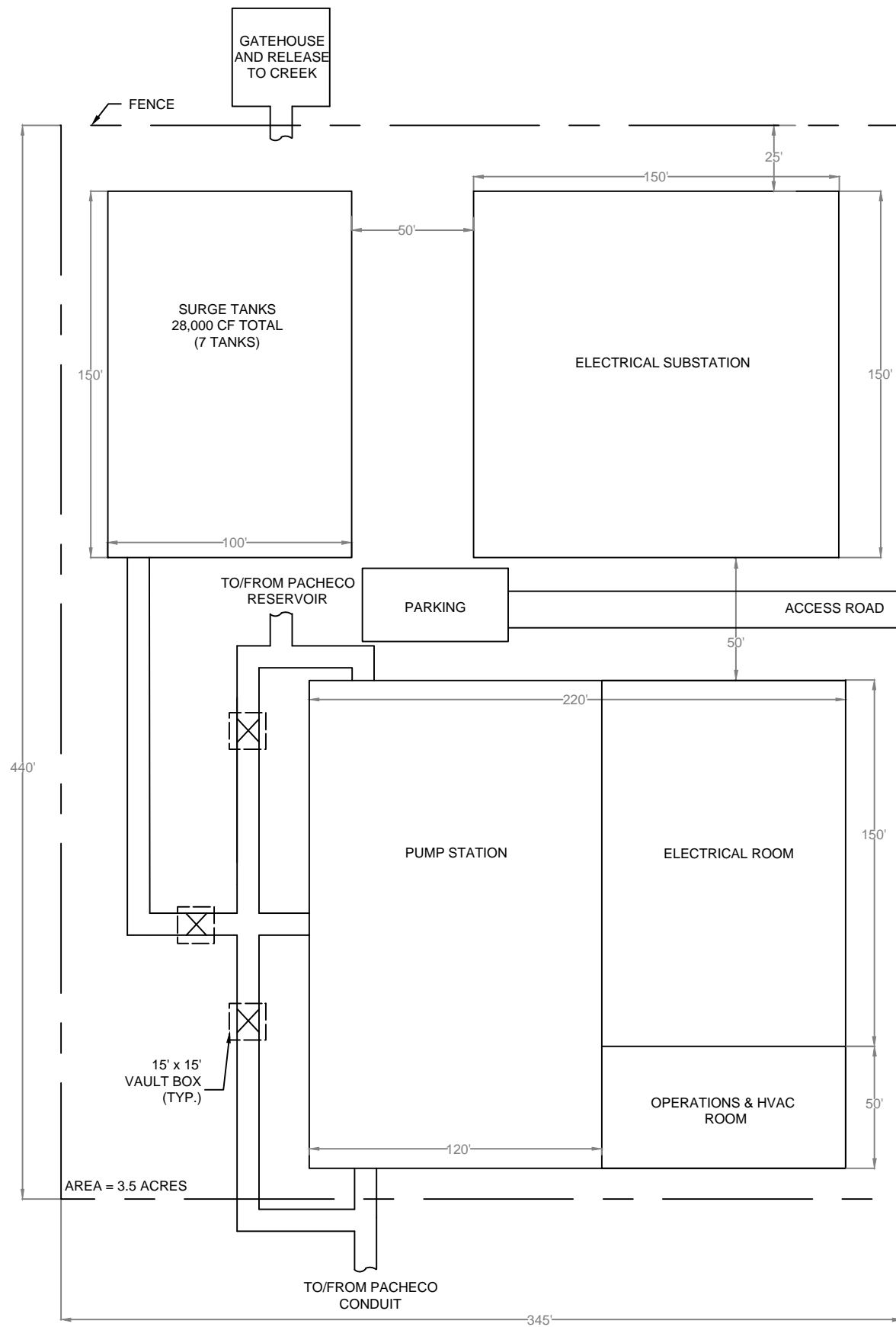
NOTES:
PUMPS WOULD OPERATE TO DELIVER WATER FROM PACHECO RESERVOIR TO PACHECO CONDUIT WHEN THE RESERVOIR ELEVATION IS APPROXIMATELY BELOW 620 FT.

PUMP TO PACHECO CONDUIT



SCALE
HOR: 1" = 2,000'
VERT: 1" = 100'



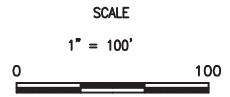
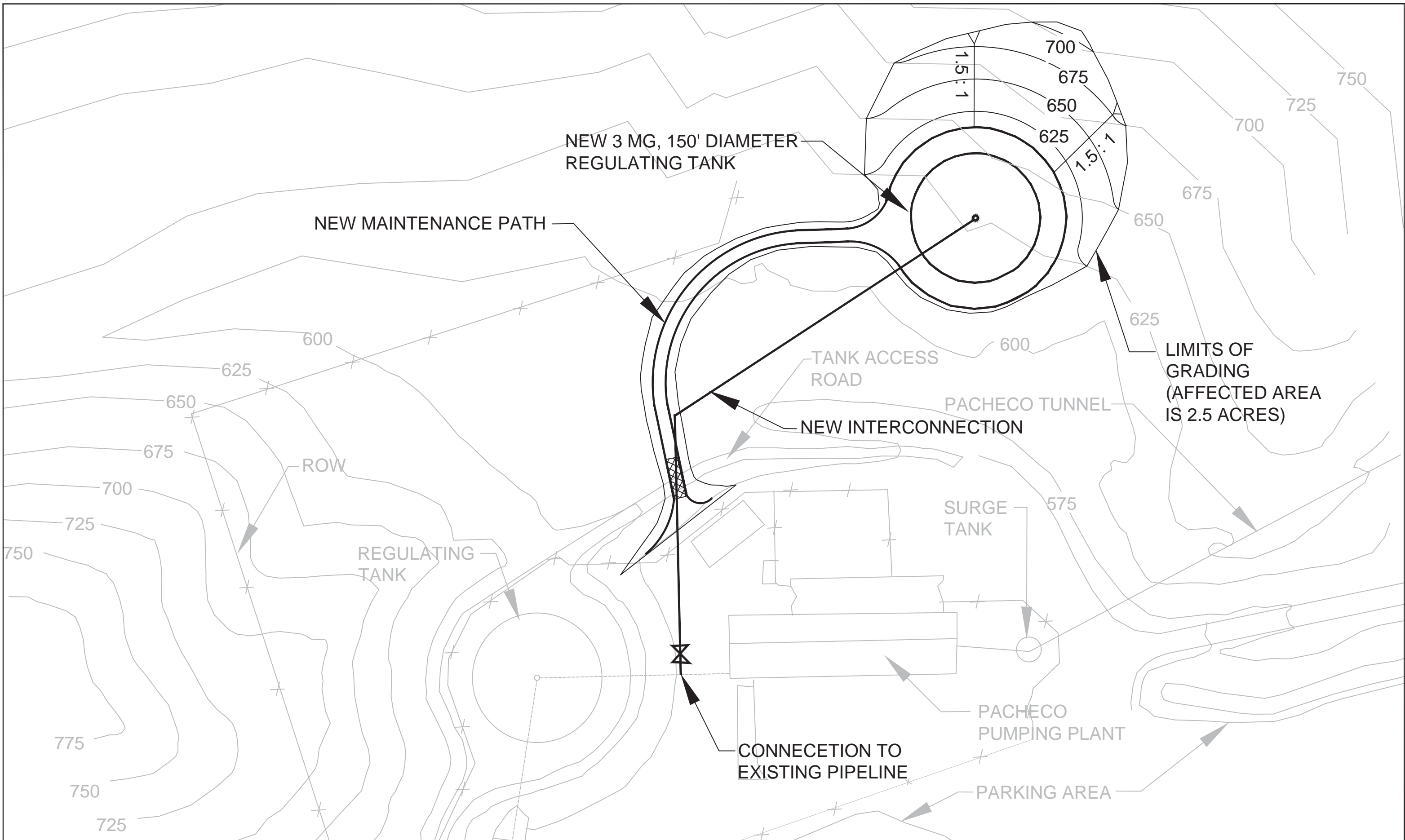


NOTES:
 1) SURGE ANALYSIS WILL BE PERFORMED TO DETERMINE THE SIZE AND NUMBER OF SURGE TANKS REQUIRED, DURING SUBSEQUENT STUDIES



SCALE
 1" = 60'
 0 30 60



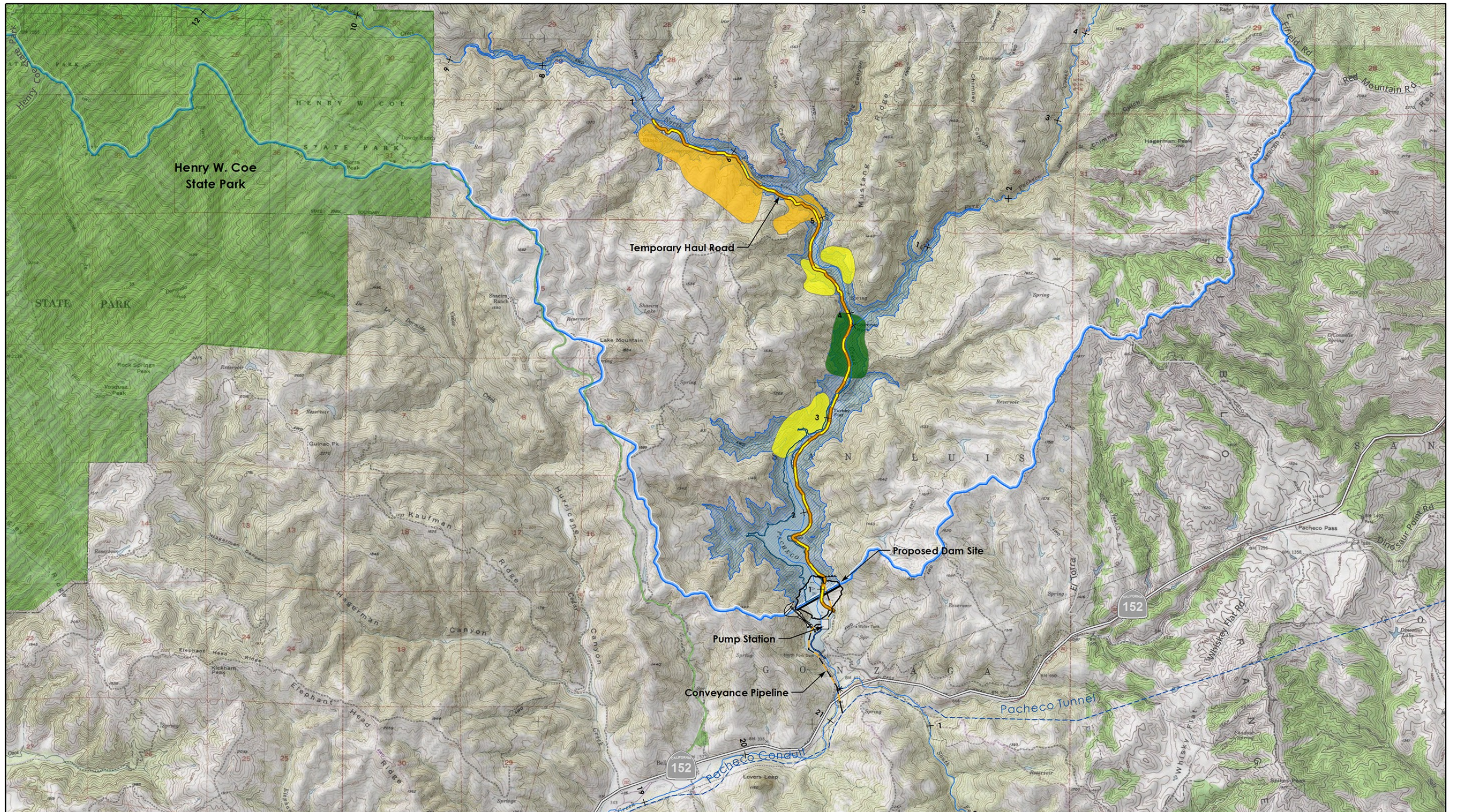


LEGEND

- EXISTING FEATURES
- NEW REGULATING TANK & MAINTENANCE PATH
- NEW CONTOURS




Exhibit 10





**REGULATING TANK AT PACHECO PUMPING PLANT
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017**






Santa Clara Valley
Water District



-  Existing Tunnel/Pipeline
-  Proposed Tunnel/Pipeline
-  Temporary Haul Road

-  Proposed Dam Footprint
-  Potential Reservoir Footprint
-  Existing Pacheco Lake above Proposed Dam
-  Contributing Watershed

 Henry W. Coe State Park

- Borrow Areas**
-  Potential Impervious Zone Source (Landslides and Franciscan Melange)
 -  Potential Random Zone Source
 -  Potential Rock Source



0 2,000 4,000 6,000 Feet

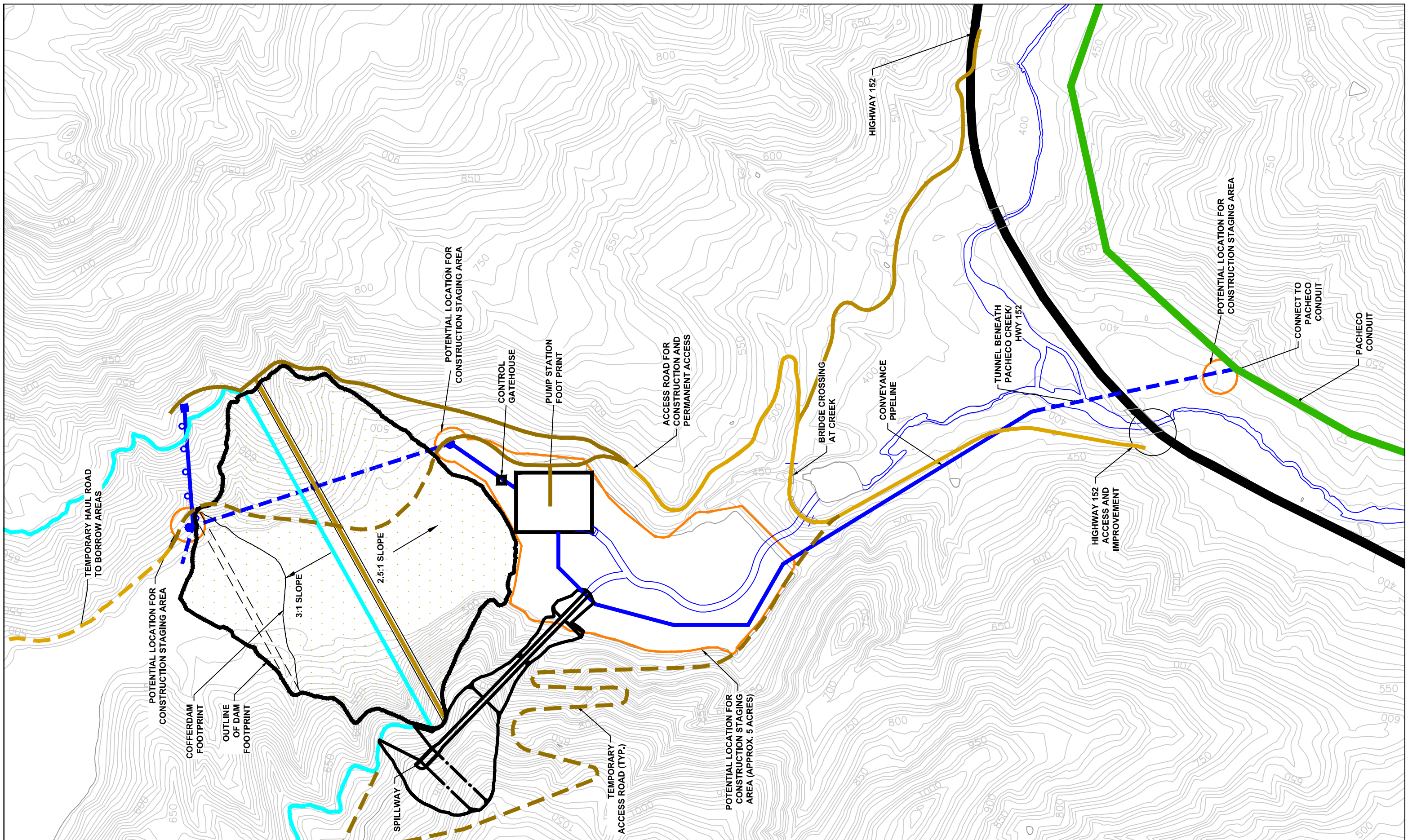
Prepared: July, 2017
Projection: CA SP III NAD83
Landslide Data: Cotton (1972)
Borrow Areas: Wahler (1993)
Background: USGS 7.5' Topo

G:\SCVWD\ MXDs\ Reports\Prop1\ReservoirBorrowAreas_AltA_20170725.mxd

Exhibit 11

BORROW AREAS

**PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017**



SCALE:
1"=500'

Santa Clara Valley Water District



- EXISTING PACHECO CONDUIT IMPROVEMENT OF
- EXISTING ACCESS ROAD (TEMPORARY)
- NEW ACCESS ROAD (TEMPORARY)
- MAX. WATER SURFACE ELEVATION OF 694 FT
- IMPROVEMENT OF EXISTING ACCESS ROAD (PERMANENT)
- POTENTIAL STAGING AREAS

Exhibit 12
CONSTRUCTION ACCESS AND STAGING AREAS
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017

NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX



July 5, 2017

Melih Ozbilgin
Santa Clara Valley Water District

Email to: mozbilgin@valleywater.org

RE: Native American Consultation, Pursuant to Assembly Bill 52, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2, Pacheco Reservoir Expansion Project, Santa Clara and San Benito Counties

Dear Ms. Ozbilgin:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the referenced codes is to avoid and or mitigate impacts to tribal cultural resources, as defined, in the California Environmental Quality Act (CEQA).

As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding or mitigating impacts to tribal cultural resources:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.1(d))

The law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC also believes that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the Area of Potential Effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
 - A listing of any and all known cultural resources that have already been recorded or are adjacent to the APE, such as known archaeological sites;
 - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
 - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
 - Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The results of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission had a positive result. For more information about this/these site(s), please contact the Amah Mutsun Tribal Band, the Ohlone/Coastanoan-Esselen Nation at (805) 629-5189, The Coastanoan Rumsen Carmel Tribe at (909) 524-8041, and the Ohlone Indian Tribe.
4. Any ethnographic studies conducted for any area including all or part of the potential APE; and
5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive. A negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we are able to assure that our consultation list remains current.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov.

Sincerely,



 Frank Lienert
Associate Governmental Program Analyst

**Native American Heritage Commission
Tribal Consultation List
July 5, 2017**

Amah Mutsun Tribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632
vlopez@amahmutsun.org
(916) 743-5833

Ohlone/Costanoan
Northern Valley Yokuts

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024
ams@indiancanyon.org
(831) 637-4238

Ohlone/Costanoan

Amah Mutsun Tribal Band of Mission San Juan Bautista
Irene Zwielerlein, Chairperson
789 Canada Road
Woodside, CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office

Ohlone/Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden, CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791
Milpitas, CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

Ohlone / Costanoan

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152
Fremont, CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 210080.1, 21080.3.1 and 21080.3.2.
Pacheco Reservoir Expansion Project, Santa Clara County

**Native American Heritage Commission
Tribal Consultation List
July 5, 2017**

Amah Mutsun Tribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632
vlopez@amahmutsun.org
(916) 743-5833
Ohlone/Costanoan
Northern Valley Yokuts

Amah Mutsun Tribal Band of Mission San Juan Bautista
Irene Zwielerlein, Chairperson
789 Canada Road
Woodside, CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office
Ohlone/Costanoan

Xolon-Salinan Tribe
Karen White, Council Chairperson
PO Box 7045
Spreckels, CA 93962
blukat41@yahoo.com
831-238-1488
Salinan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024
ams@indiancanyon.org
(831) 637-4238
Ohlone/Costanoan

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 210080.1, 21080.3.1 and 21080.3.2.
Pacheco Reservoir Expansion Project, San Benito County

United States Geologic Survey. *Preliminary Geologic Description of the San Jose 30 X 60 Minute Quadrangle* by Carl Wentworth, Clark Blake, Robert McLaughlin, and Russell Graymer. Open-File Report 98-795, U.S. Geologic Survey. California, US.

Wahler and Associates. 1993. *Reconnaissance Level Evaluation of Alternative Dam and Reservoir Site*.

