SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

FOR DAM SAFETY INTERIM RISK REDUCTION MEASURES AND RESERVOIR DRAWDOWN AND OPERATIONS PLAN

Anderson Dam Hydroelectric Project - FERC Project No. 5737-007

California

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
888 First Street, NE
Washington, D.C. 20426

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ACRONYMS AND ABBREVIATIONS

ac-ft	acre-feet
ADSRP	Anderson Dam Seismic Retrofit Project
ADTP	Anderson Dam Tunnel Project
Advisory Council	Advisory Council on Historic Preservation
AFM	Anderson Force Main
AIS	Aquatic Invasive Species
AMM	Avoidance and Minimization Measure
APE	Area of Potential Effects
BAAQMD	Bay Area Air Quality Management District
BGEPA	Bald and Golden Eagle Protection Act
BMPs	best management practices
°C	degrees Celsius
CalFire	California Department of Forestry and Fire Protection
California DFG	California Department of Fish and Game
California DFW	California Department of Fish and Wildlife
California SHPO	California State Historic Preservation Officer
CalTrout	California Trout
CCC	Central California Coast
CCFPP	Coyote Creek Flood Protection Project
CEQ	Council on Environmental Quality
cfs	cubic feet per second
Commission or FERC	Federal Energy Regulatory Commission
Corps	U.S. Army Corps of Engineers

County Parks	Santa Clara County Parks and Recreation Department
CRLF	California red-legged frog
CWA	Clean Water Act
CWMZ	Cold Water Management Zone
CVP	Cross Valley Pipeline
deadpool	reservoir elevation 488 feet
D2SI	the Commission's Division of Dam Safety and Inspections
DPS	Distinct Population Segment
EA	Environmental Assessment
eDNA	environmental DNA
EFH	essential fish habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ºF	degrees Fahrenheit
FAHCE agreement	Fisheries and Aquatic Habitat Cooperative Effort Agreement
FOCP	FERC Order Compliance Project
FPA	Federal Power Act
ft	feet
FWS	U.S. Fish and Wildlife Service
gpm	gallons per minute
HDMP	Wetland and Riparian Habitat Dryback Monitoring Plan
IRRM	Interim Risk Reduction Measures
mcy	million cubic yards
MW	megawatts

µg/L	micrograms/Liter
mg/L	milligrams/Liter
MRL	method reporting limit
MOU	Memorandum of Understanding
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MTBM	micro tunnel boring machine
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
National Register	National Register of Historic Places
NTUs	Nephelometric Turbidity Units
October 1 EA	EA issued on October 1, 2020
October 1 Order	Order issued on October 1, 2020
Open Space Authority	Santa Clara Valley Open Space Authority
PA	Programmatic Agreement
PBFs	physical and biological features
PFMP	Pacific Coast Salmon Fishery Management Plan
PCBs	polychlorinated biphenyl compounds
PPMP	Phytophthora Pathogen Management Plan
Reclamation	U.S. Bureau of Reclamation
TSS	total suspended solids
TWG	Fisheries Technical Work Group
SCVHA	Santa Clara Valley Habitat Agency
SCVHP	Santa Clara Valley Habitat Plan
SCVWCD	Santa Clara Valley Water Conservation District
SDPS	Southern Distinct Population Segment

supplemental EA	Supplemental Environmental Assessment
Vaki	computer-based fish counter
Valley Water or exemptee	Santa Clara Valley Water District
Water Board	California State Water Resources Control Board

EXECUTIVE SUMMARY

On October 1, 2020, Commission staff issued an Environmental Assessment (EA) focused on Santa Clara Valley Water's (Valley Water, or exemptee) July 27, 2020 filing of a Reservoir Drawdown and Operations Plan, detailing how it proposed to implement dam safety interim risk reduction measures at the Anderson Dam in response to a February 20, 2020 directive from Commission staff. The October 1 EA focused on the drawdown of the reservoir and closely connected actions including reservoir rim stability improvements and mitigation including an extension to the Cross Valley Pipeline. Commission staff hereby supplement the October 1 EA to analyze the effects of those actions from the Reservoir Drawdown and Operations Plan not fully analyzed in the October 1 EA including the exemptee's proposal to construct and operate a low-level outlet tunnel, reopen the north channel of Coyote Creek, replace the downstream Coyote percolation dam, and implement downstream flood control measures.

Commission staff supplement the October 1 EA by adding additional analysis for the actions described above by resource area. The exemptee's Reservoir Drawdown and Operations Plan, considered in full, will have adverse effects to water quantity, water quality, aquatic and terrestrial resources, recreation, cultural resources, and aesthetics. Valley Water proposed a number of best management practices (BMPs) and mitigation measures to reduce adverse effects. National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS) provided conservation recommendations to the Commission through emergency consultation provisions of section 7 of the Endangered Species Act. The California Water Resources Control Board issued a water quality certificate (WQC) requiring Valley Water to develop plans for implementing its proposed actions. Commission staff and the California State Historic Preservation Office also developed a Programmatic Agreement (PA) using expedited consultation procedures to mitigate for adverse effects to historic properties, including any unknown discoveries.

The staff alternative described in this Supplemental EA considers Valley Water's proposed mitigation measures and those measures provided by resource agencies. Commission staff recommend Valley Water implement its Reservoir Drawdown and Operations Plan, stipulations of the PA, conditions of the WQC, and develop and implement a number of plans for terrestrial and aquatic resources as recommended by NMFS and FWS.

The Supplemental EA concludes that Valley Water's implementation of the staff alternative is the preferred action. Valley Water's plans to comply with the February 20, 2020 dam safety directives through its Reservoir Drawdown and Operations Plan will reduce a dam safety risk and should be implemented with the mitigation measures identified in the staff alternative to offset adverse effects of the proposed action.

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
Federal Energy Regulatory Commission
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Washington, DC

Anderson Dam Hydroelectric Project
FERC No. 5737-007

1.0 INTRODUCTION

1.1 Filing

Filing type:	Reservoir Drawdown and Operations Plan
Date Filed:	July 27, 2020
Applicant's Name:	Santa Clara Valley Water District (Valley Water)
Waterbody:	Coyote Creek
County and State:	Santa Clara County, California
Federal Lands:	None

1.2 Purpose of Action

1.2.1 Background

The Federal Energy Regulatory Commission (Commission) issued an exemption to Santa Clara Valley Water District on August 24, 1984 for the Anderson Dam Project (project).[1] The project is located on Coyote Creek in Santa Clara County, California and is composed of: a 240-foot-high, 1,385-foot-long dam; a reservoir with a maximum surface area of 1,240 acres and storage capacity of 89,278 acre-feet (ac-ft) at a spillway elevation of 627.8 feet (ft);[2] a 54-inch diameter, 2,800-foot-long penstock; a powerhouse with a total installed capacity of 800 kilowatts; and a 100-foot-long transmission line connecting the project to the electrical grid. The project is classified as having a high

[1] *Santa Clara Valley Irrigation District*, 28 FERC ¶ 62,276 (1984) (Exemption Order). On July 29, 2019, Valley Water filed clarifying information noting Santa Clara Valley Water District as the exemptee and provided updated project contacts.

[2] All elevations throughout this document are given in North American Vertical Datum 1988.

hazard potential because in the event of a dam failure, the populated areas downstream including Morgan Hill and San Jose, California, will be inundated.[3]

Valley Water has been preparing plans to retrofit the Anderson Dam in response to analyses regarding the seismic stability of the dam (termed the Anderson Dam Seismic Retrofit Project, or ADSRP). However, on February 20, 2020, the Commission's Director of the Division of Dam Safety and Inspections (D2SI) required Valley Water to implement dam safety interim risk reduction measures (IRRM) in response to new engineering analyses Valley Water prepared demonstrating additional risks of dam failure in response to a seismic event. The IRRM required Valley Water to: (1) immediately maintain the project reservoir no higher than elevation 565 ft, and take all appropriate measures to maintain and quickly lower the reservoir to elevation 565 ft if the reservoir rises in the event of significant inflow; (2) to begin further lowering the reservoir to elevation 488 ft (deadpool) no later than October 1, 2020 and once elevation 488 ft is reached, take all appropriate measures to maintain and quickly lower the reservoir to deadpool in the event of significant inflow; and (3) to file designs for a proposed low-level outlet. Valley Water proposed, through its Reservoir Drawdown and Operations Plan, to draw down the reservoir beginning no later than October 1, 2020 and construct and operate a low-level outlet to comply with the February 20, 2020 IRRM directives. Valley Water refers to the actions proposed in its Reservoir Drawdown and Operations Plan as the FERC Order Compliance Project (FOCP), and the construction of a new low-level outlet as the Anderson Dam Tunnel Project (ADTP).

On October 1, 2020, Commission staff issued an environmental assessment (October 1 EA) on Valley Water's plans for implementing the IRRM and its Reservoir Drawdown and Operations Plan, focused on the reservoir drawdown. Also, on October 1, 2020, Commission staff issued an Order approving, in part, the Reservoir Drawdown and Operation Plan for the drawdown of the reservoir and associated mitigation measures (October 1 Order).[4] As stated in the October 1 EA and Order, Commission staff required additional information regarding Valley Water's plans for the ADTP and associated mitigation measures to analyze the associated effects and would supplement the October 1 EA, and thereafter act on those elements.

This Supplemental EA focuses on the environmental effects of: constructing and operating the low-level outlet tunnel; reopening the north Coyote Creek Channel; and Valley Water's additional proposed measures including replacing the downstream Coyote

[3] The Commission defines high hazard as "any dam whose failure, in the judgment of the Commission or its authorized representative, might endanger human life or cause significant property damage, or which meets the criteria for high hazard potential as defined by the Corps of Engineers in 33 [C.F.R.] part 222." 18 C.F.R. § 12.31(b) (2020).

[4] *Santa Clara Valley Water District*, 173 FERC ¶ 62,001 (2020).

percolation dam and implementing downstream flood control measures. This Supplemental EA satisfies the Commission's responsibilities under the National Environmental Policy Act (NEPA).[5] As discussed below, the no-action alternative is not a viable alternative given the significant dam safety risk a seismic event could present to the dam and downstream areas. The staff alternative is presented in *Supplemental EA Section 4.1 Staff Recommended Measures* and includes recommended measures to mitigate adverse effects to the environment.

1.3 Statutory and Regulatory Requirements

The IRRM and Valley Water's proposed Reservoir Drawdown and Operations Plan are subject to the applicable statutes described below.

1.3.1 Federal Power Act

The Commission is authorized to exempt from the licensing requirements of Part I of the Federal Power Act (FPA) small hydropower projects with an installed capacity of 10 megawatts (MW) or less that use an existing dam for the generation of electricity.[6] An exempted project however is still subject to the Commission's dam safety regulations when the project's dam "is more than 33 feet in height above streambed . . . impounds more than 2,000 acre-feet of water, or has a significant or high hazard potential."[7] When an exemption is considered high hazard, the Commission includes an article requiring compliance with Part 12 of the Commission's Rules and Regulations, which govern the safety of water power projects and project works.[8]

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[5] On July 16, 2020, the Council on Environmental Quality issued a final rule, *Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act* (Final Rule, 85 Fed. Reg. 43,304), which was effective as of September 14, 2020; however, the NEPA review of this project was already in process at that time and is prepared pursuant to the 1978 regulations.

[6] *See* Sections 405 and 408 of the Public Utility Regulatory Policies Act of 1978, 16 U.S.C. §§ 2705; 2708 (2018); amended by the Hydropower Regulatory Efficiency Act of 2013, Pub. L. No. 113-23, 127 Stat. 493 (2013) (amending, *inter alia*, section 405 to define "small hydroelectric power projects" as having an installed capacity that does not exceed 10 megawatts).

[7] 18 C.F.R. § 4.106(h) (2020).

[8] 18 C.F.R. pt 12. (2020).

The Commission issued an exemption to Valley Water for the Anderson Dam Project, and because the project is required to comply with the Part 12 dam safety regulations, included Article 6, that reserved the authority to regulate safety aspects of the project under Part 12 of the Commission's Rules and Regulations.[9] The exemption order further requires that "[f]or the purposes of applying these provisions of 18 C.F.R. Part 12, the exempted project is deemed to be a licensed project development and the owner of the exempted project is deemed to be a licensee." [10]

1.3.2 Clean Water Act

Under section 401(a) of the Clean Water Act (CWA),[11] the Commission may not authorize construction or operation of a hydroelectric project that may result in a discharge into the navigable waters of the United States unless the state water quality certifying agency either has issued water quality certification for the project or has waived certification. Section 401(d) of the CWA[12] provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.

As explained in the October 1 EA and Order, Valley Water's proposal to dewater the reservoir to elevation 488 ft does not constitute a new discharge from the project, as the drawdown was accomplished by releasing water through the existing reservoir outlet. The exemption for the project does not require any minimum or maximum discharge rates, therefore the drawdown of the reservoir did not exceed any currently allowable discharge rates.

Valley Water's proposed ADTP however, as well as their proposed avoidance and minimization measures, would result in a new discharge and requires a water quality certification (WQC) from the California State Water Resources Control Board (Water Board). On August 14, 2020, Valley Water applied to the Water Board for a section 401 WQC for the ADTP, as well as their proposed avoidance and minimization measures. On November 9, 2020, the Water Board issued a WQC for the project, which includes 40 conditions.[13] Twenty-three (23) of the conditions are general or administrative and are

[9] Exemption Order, 28 FERC at 63,493.

[10] Exemption Order, 28 FERC at 63,493.

[11] 33 U.S.C. § 1341(a) (2018).

[12] 33 U.S.C. § 1341(d) (2018).

[13] The WQC was filed with the Commission on December 3, 2020.

not discussed further. Seven conditions require Valley Water to submit the following plans to the Water Board, Division of Water Rights for review and approval: (1) an Anderson Dam Tunnel and Northern Channel Reopening Plan; (2) a Cross Valley Pipeline Extension and Chillers Plan; (3) a Bank and Rim Stability Plan; (4) an Existing Intake Reinforcement Plan; (5) a Percolation Dam Replacement Plan; (6) a Flood Management Measures Plan; and (7) a Mercury, Diazinon and Polychlorinated Biphenyls (PCBs) Plan. The certification also requires Valley Water to: (1) ensure that activities comply with applicable water quality objectives of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan); (2) have a qualified Biological Monitor on site; (3) have spill containment, clean-up and spill kits available on site; (4) report spill incidents; (5) implement erosion control measures; (6) control and dispose construction debris; (7) wash equipment to be free from sediment, debris and foreign matter; (8) confine vehicles and equipment to designated work areas, along with secondary containment; (9) prohibit the discharge of petroleum products, construction materials and hazardous materials; and (10) restore temporarily affected areas to pre-construction contours and conditions.

1.3.3 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally-listed threatened or endangered species or result in the destruction or adverse modification of the critical habitat of such species.[14] By letter dated May 22, 2018, the Commission designated Valley Water as its non-federal representative to conduct informal consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the ESA. Several federally listed species are known to use or could potentially be affected by the proposed project, including: California tiger salamander, California red-legged frog (CRLF), Coyote Ceanothus, and the Central California Coast (CCC) distinct population segment (DPS) of steelhead.

Following the February 20, 2020 requirement to implement the IRRM, Commission staff issued a letter on March 16, 2020 seeking concurrence from NMFS and FWS on the use of emergency consultation procedures under section 7 of the ESA[15] as the dam safety directive does not allow sufficient time to complete standard formal consultation.

FWS and NMFS acknowledged use of the emergency consultation procedures in letters filed March 17 and March 24, 2020, respectively. FWS and NMFS indicated they

[14] 16 U.S.C. § 1536 (2018).

[15] 50 C.F.R. § 402.05 (2020).

will continue to provide technical assistance and will provide conservation recommendations for minimizing adverse effects to federally listed species and critical habitat. On August 24, 2020, and revised on September 16, 2020, FWS filed conservation recommendations with the Commission. NMFS filed conservation recommendations on August 14, 2020 pertaining to fish rescue and relocation activities, and additional recommendations for other aspects of the FOCP were filed with the Commission on September 1, 2020. On November 23, 2020, NMFS filed further clarification about its recommended measures.

1.3.4 Magnuson-Stevens Fishery Conservation and Management Act

Federal agencies are required to consult with NMFS on actions which may adversely affect essential fish habitat (EFH)[16] pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).[17] To streamline requirements and avoid duplication, EFH consultations are typically combined with existing environmental review procedures (e.g., NEPA and ESA). Valley Water's proposal has the potential to affect EFH downstream of the dam for various life stages of fish species managed with the Pacific Coast Salmon Fishery Management Plan.

In the March 16, 2020 letter, Commission staff also sought concurrence from NMFS on the use of emergency consultation procedures under section 305(b)(2) of the MSA for EFH.[18] The March 24, 2020 letter from NMFS acknowledged the use of emergency consultation procedures and that it will provide recommendations to minimize the effects of the action on EFH. On September 15, 2020, NMFS staff filed a letter with the Commission providing recommended measures for EFH.

1.3.5 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA),[19] and its implementing regulations,[20] requires that every federal agency "take into account" how each of its undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in

[16] 50 C.F.R. § 600 (2020).

[17] 16 U.S.C. 1801 (2018).

[18] 50 C.F.R. § 600.920 (2020).

[19] 54 U.S.C. §§ 306108 et seq. (2018). The National Historic Preservation Act was recodified in Title 54 in December 2014.

[20] 36 C.F.R. Part 800 (2020).

American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register).

Following the February 20, 2020 requirement to implement the IRRM, Commission staff issued a letter on March 20, 2020 to the California State Historic Preservation Officer (California SHPO) and the Advisory Council on Historic Preservation (Advisory Council) stating that the undertaking to draw down the reservoir and construct a low-level outlet has the potential to adversely affect cultural resources. Therefore, we requested formal concurrence and expedited review, pursuant to 36 C.F.R. § 800.14(b)(1), to develop a Programmatic Agreement (PA) for the undertaking. On March 31, 2020, the Advisory Council declined to participate in the consultation process pursuant to 36 C.F.R. § 800.6(a)(1)(iii). On April 16, 2020, the California SHPO agreed that, pursuant to 36 C.F.R. § 800.14(b)(1)(ii), the PA is the appropriate means for the Commission to comply with 36 C.F.R. 800. In addition, pursuant to 36 C.F.R. § 800.3(g), the California SHPO agreed that expedited consultation is appropriate. The PA was developed for the entire FOCP proposed action. The PA was executed between the Commission and the California SHPO by signature on September 4, 2020 and September 9, 2020, respectively. The U.S. Army Corps of Engineers (Corps) and Valley Water concurred.

1.4 Public Review and Comment

1.4.1 Public Notice of Reservoir Drawdown and Operation Plan

On July 31, 2020, Commission staff issued a public notice of the exemptee's Reservoir Drawdown and Operations Plan. In response to the public notice, 13 responses were received. The Water Board and California Trout (CalTrout) filed separate comments and motions to intervene in the proceeding. The following individuals or organizations filed comments: Rich Constantine, Mayor, City of Morgan Hill; Jeffrey Hare; Sergio Jimenez, Councilmember, San Jose; Donald Lieberman; Peter Marshall; Raul Peralez, Councilmember, City of San Jose; Edward Ruder; Ted Smith; Rene Spring, Council Member, City of Morgan Hill; the Santa Clara Valley Open Space Authority (Open Space Authority); Jean-Marie White; and Paula Rasmussen. Commission staff considered all comments when preparing the October 1 EA and this Supplemental EA. Appendix A contains a listing of commenters, a summary of the comments, and the location where the comments are addressed in the October 1 EA and/or Supplemental EA.

1.4.2 Public Notice of EA

On October 1, 2020, Commission staff issued a public notice for the October 1 EA. Comments received through the public comment period are analyzed and incorporated into this Supplemental EA. In response to the notice, five responses were

received. The County of Santa Clara Parks and Recreation Department (County Parks), Jeffrey Hare, Donald Lieberman, Ted Smith, and Mr. Fioretta filed comments. See Appendix A for a listing of comments received with reference to where the comments are addressed.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 No-Action Alternative

Commission staff defined the restricted 565 ft reservoir elevation and otherwise normal project operations as the baseline conditions in the October 1, 2020 EA. The October 1 EA discusses normal project management in *October 1 EA, Section 2.2 Existing Project Management*. For this Supplemental EA, the no-action alternative is the same as described in the October 1 EA which would be to keep the reservoir at the restricted 565 ft elevation and not perform any further action at the project. Under the no-action alternative, the dam will remain a public safety risk if a seismic event were to occur at the project. The no-action is not a viable alternative given the risk to public safety should a seismic event occur at the project, and is removed from further consideration.

2.2 Applicant's Proposal

2.2.1 Proposed Reservoir Dewatering and Operations Plan

Valley Water states the purpose of the FOCP is to comply with the February 20, 2020 dam safety directives requiring implementation of IRRMs to protect the public from the risk of dam failure due to seismic activity, and to develop and implement avoidance and minimization measures (AMMs).

Valley Water's FOCP consists of the following actions proposed in the Reservoir Drawdown and Operations Plan filed with the Commission on July 27, 2020 (Figure 1). *Supplemental EA Section 2.2.2 Measures Analyzed in this Supplemental EA* lists those actions analyzed in the October 1 EA and approved through the October 1 Order:

1. *Reservoir Drawdown to Deadpool.* Drawdown of Anderson Reservoir to deadpool elevation 488 ft beginning October 1, 2020 using the existing outlet works. Implement wet and dry weather reservoir operation and management measures to maintain deadpool via the existing outlet and to augment surface water for groundwater recharge and in-stream environmental flows within Coyote Creek until Anderson Dam tunnel is operational (see item 3).

2. *Anderson Dam Tunnel Construction.* Construct a new outlet system that includes a new low-level outlet tunnel, 8-foot-diameter lake tap, outlet structure, and discharge channel. Reopen the original Coyote Creek channel (northern channel)

downstream of the existing dam (see item 4(b) below). The new outlet system, collectively called the ADTP, will be constructed at the base of Anderson Dam, through the right (looking downstream) abutment, along the southern side.

3. *Anderson Dam Tunnel Operation and Maintenance.* Operate and maintain the existing outlet and the Anderson Dam tunnel after construction of the ADTP by maintaining elevation 488 ft (or a higher reservoir elevation if authorized by the Commission), and provide surface water augmentation for groundwater recharge and environmental in-stream flows within Coyote Creek until seismic deficiencies can be fully mitigated at Anderson Dam (i.e., ADSRP).

4. *Avoidance and Minimization Measures.* Implement measures to secure alternative water supplies and minimize environmental effects, including:

    a. *Bank and Rim Stability Improvements*. Conduct geotechnical investigations and install monitoring devices for areas of known landslides along Anderson Reservoir rim to address potential effects of reservoir drawdown. If additional measures are determined necessary through analysis of the geotechnical investigation results, Valley Water will install necessary structural improvements to protect against potential landslides and/or make repairs if damage occurs.

    b. *Existing Intake Structure Modifications*. Conduct geotechnical investigations and install monitoring devices near the intake structure to address potential geotechnical effects of dewatering on the existing outlet structure. If additional measures are determined necessary through analysis of the geotechnical investigation results, Valley Water will install necessary structural improvements to reinforce the existing Anderson Dam intake structure and/or make repairs if damage occurs.

    c. *Creek Channel and Bank Erosion Control Modifications.* Modify the channel to avoid erosion effects within Coyote Creek that are anticipated as a result of the combined flow releases through the existing Anderson Dam outlet and the new ADTP, once constructed.

    d. *Imported Water Releases and Cross Valley Pipeline Extension.* Import water to Coyote Creek via the Coyote discharge line immediately downstream of Anderson Dam, at the top of Coyote Creek cold water management zone (CWMZ), as it currently does, throughout the FOCP to protect against potential risks to groundwater recharge and water supply reliability for the Coyote Valley and South San Jose. Secondarily, construct a new spur off the Cross Valley Pipeline (CVP) that will convey imported water releases downstream of the County of Santa Clara-owned Ogier Ponds. Once the

pipeline extension is operational, release chilled imported water into Coyote Creek at the top of the CWMZ, and release additional imported water downstream of Ogier Ponds to maintain the full groundwater recharge program. Install chillers near the turnout for the Coyote discharge line so that up to 10 cubic feet per second (cfs) can be cooled prior to releasing it to the CWMZ.

e. *Coyote Percolation Dam Replacement*. Replace the existing flashboard dam at the downstream Coyote percolation pond with an inflatable bladder dam that can be deflated (lowered) to allow flows in excess of 800 cfs to pass safely.[21] The existing dam is not designed to withstand flows greater than 800 cfs and removing the structure altogether will substantially impair groundwater recharge in a sensitive groundwater basin.

f. *Coyote Creek Flood Management Measures*. Acquire or elevate up to ten structures on nine parcels, construct up to six spans of off-stream floodwalls, and construct a levee to reduce flood risks,[22] arising from higher maximum Anderson Dam tunnel flows combined with outflows from the existing outlet and Coyote Creek inflows resulting from storm events.

g. *Steelhead and Fish Avoidance and Minimization Measures.* In addition to the releases of water to Coyote Creek described above in (d), implement fish avoidance measures including: provide spring pulse flows; conduct fish rescue and relocation in Coyote Creek and Anderson Reservoir; install a fish trap, also known as a fyke trap; maintain normal operation of Coyote Reservoir; augment streamflow downstream of Anderson Dam; re-open a historical Coyote Creek channel; monitor the CWMZ; and monitor water quality.

h. *Implementation of Additional Project-specific Avoidance and Minimization Measures.* Implement project specific BMPs and other environmental protection measures to protect water quality and biological resources, including measures to protect ESA-listed species from the Santa Clara Valley Habitat Plan (SCVHP).

[21] The Coyote percolation dam is not part of the Anderson Dam Project as defined in the exemption and is located 11 miles downstream of the Project.

[22] These measures are located at least 15 miles downstream of Anderson Dam.

2.2.2 Measures Analyzed in this Supplemental EA

The October 1 EA analyzed the effects of the following actions and the October 1 Order approved the following components of the Reservoir Drawdown and Operations Plan:

- Drawing down the reservoir to deadpool elevation
- Bank and rim stability improvements
- Existing intake structure modifications
- Imported water releases and CVP extension
- Steelhead and fish avoidance and minimization measures
- Implementation of BMPs and other environmental protection measures

In this Supplemental EA, Commission staff analyze the environmental effects of, and avoidance and minimization measures associated with:

- Constructing and operating the low-level outlet tunnel (Figure 2)
- Creek channel and bank erosion measures (Figure 2)
- Replacing the Coyote percolation dam (Figure 3)
- Coyote Creek flood management measures (Figure 4-6)
- Reopening of the historical Coyote Creek channel (Figure 7)

Figure 1: Location of proposed FERC Order Compliance Project actions (Source: Horizon Water and Environment, 2020).

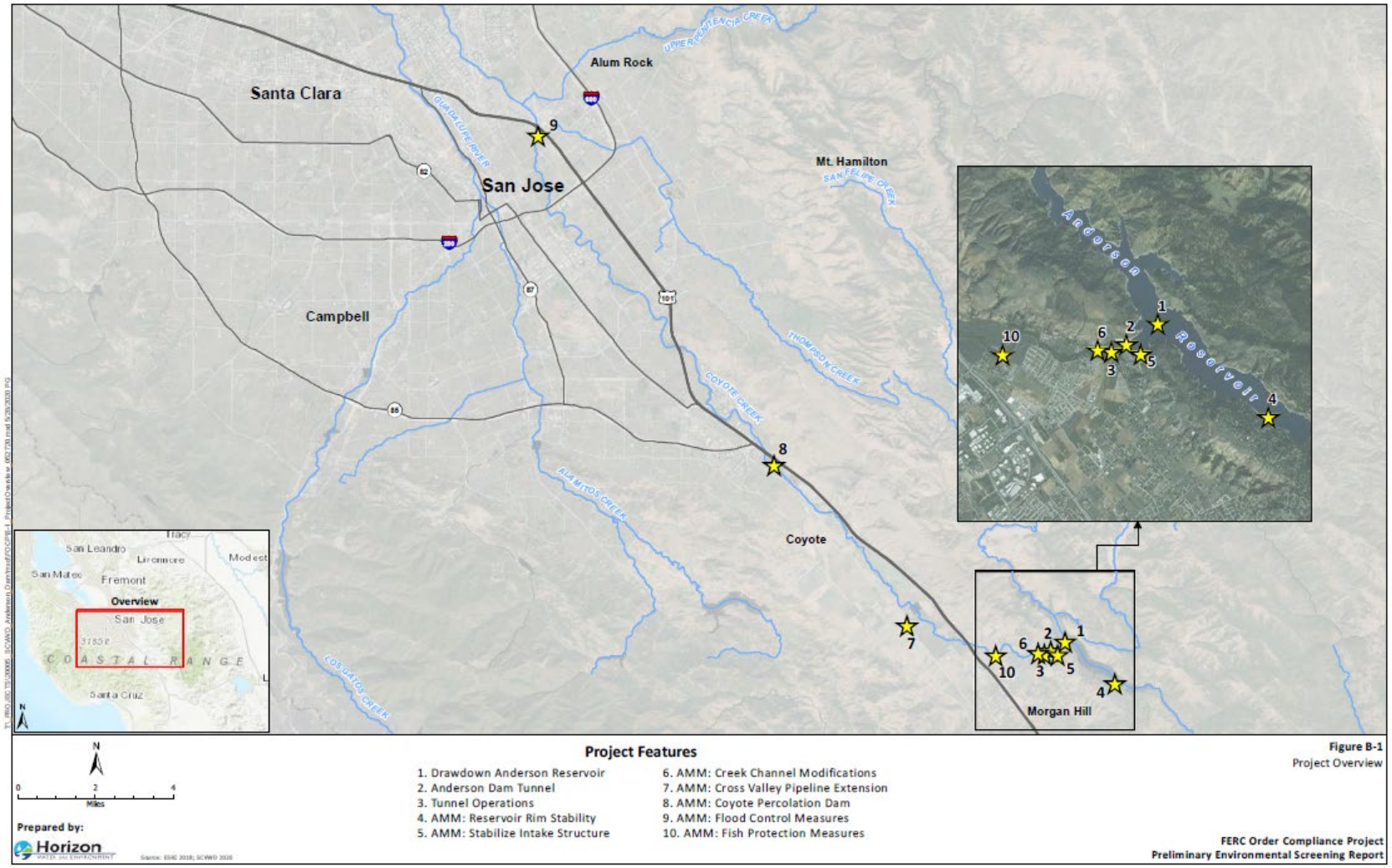


Figure 2: Location of low-level outlet and tunnel construction and creek channel modifications (Source: Valley Water, 2020a).

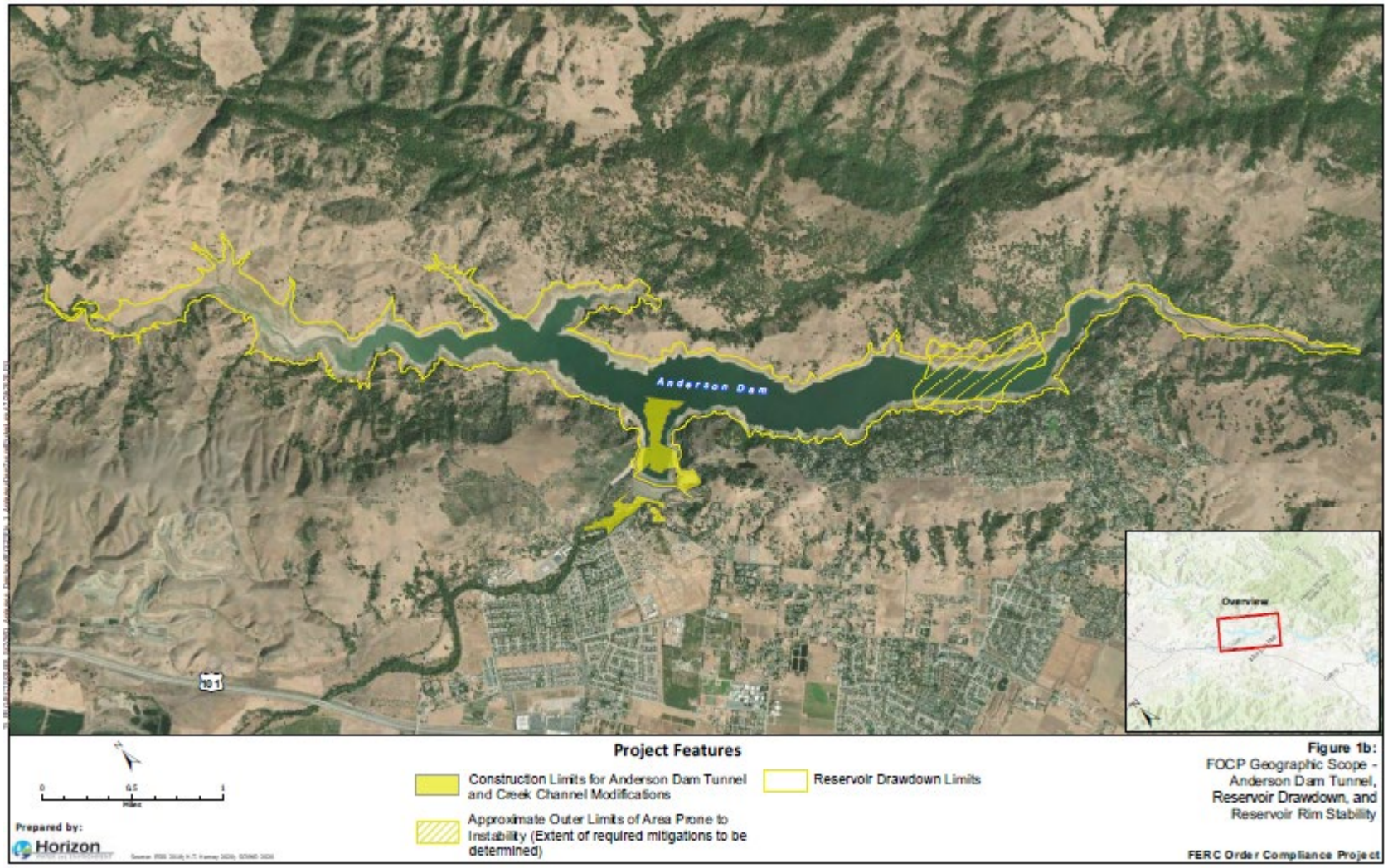
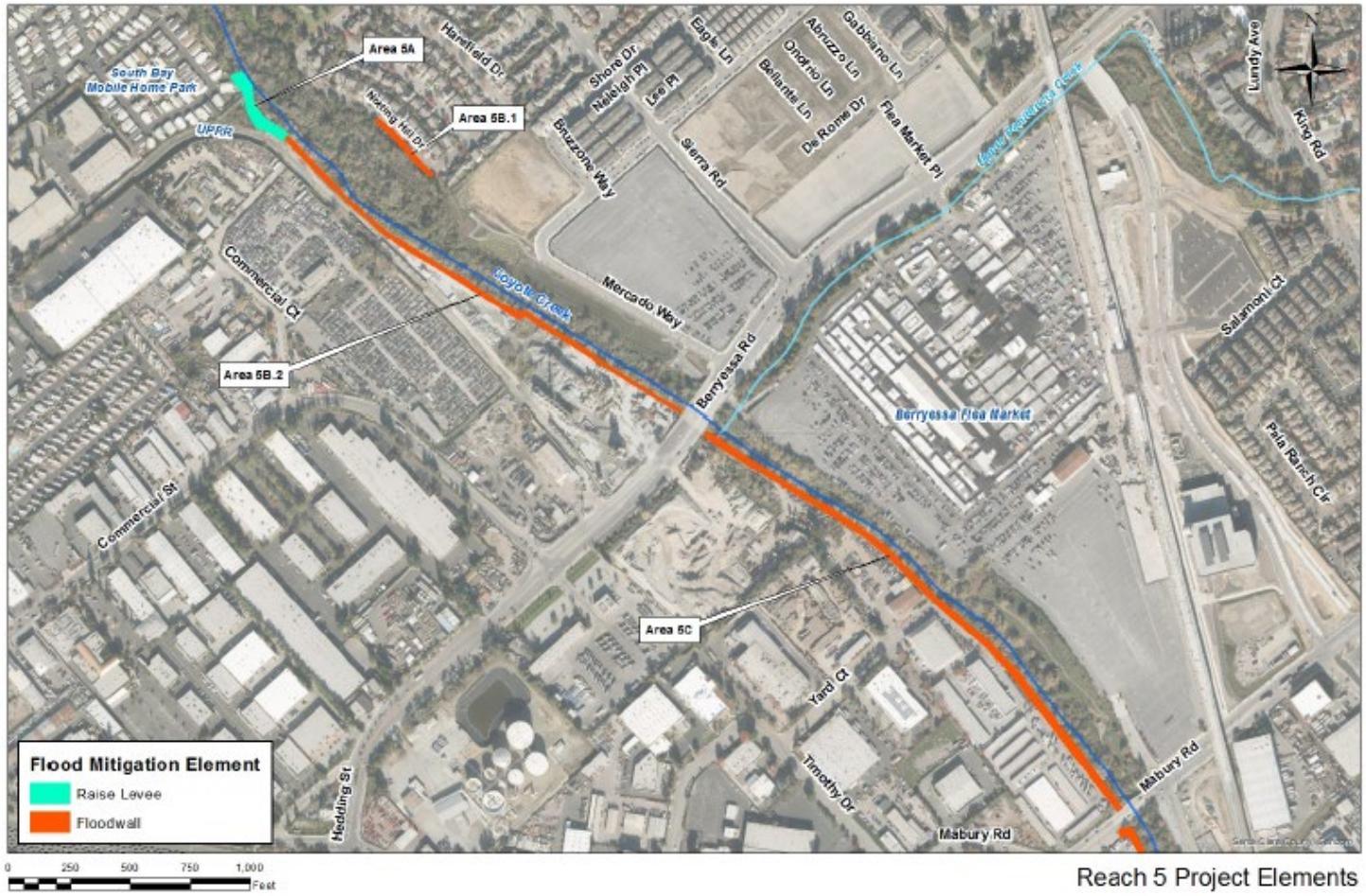


Figure 3: Coyote Percolation Dam (Source: Valley Water, 2020a).

Figure 4: Location of proposed levee and floodwalls between Mabury Road and the South Bay Mobile Home Park (Source: Valley Water, 2020g).



The flood management measures proposed for the reach of the Coyote Creek in Figure 4 include a levee, two segments of nine-foot-tall floodwall extending along the west bank from the levee to Mabury Road, and a segment of two-foot-tall floodwall on the east bank along Notting Hill Drive.

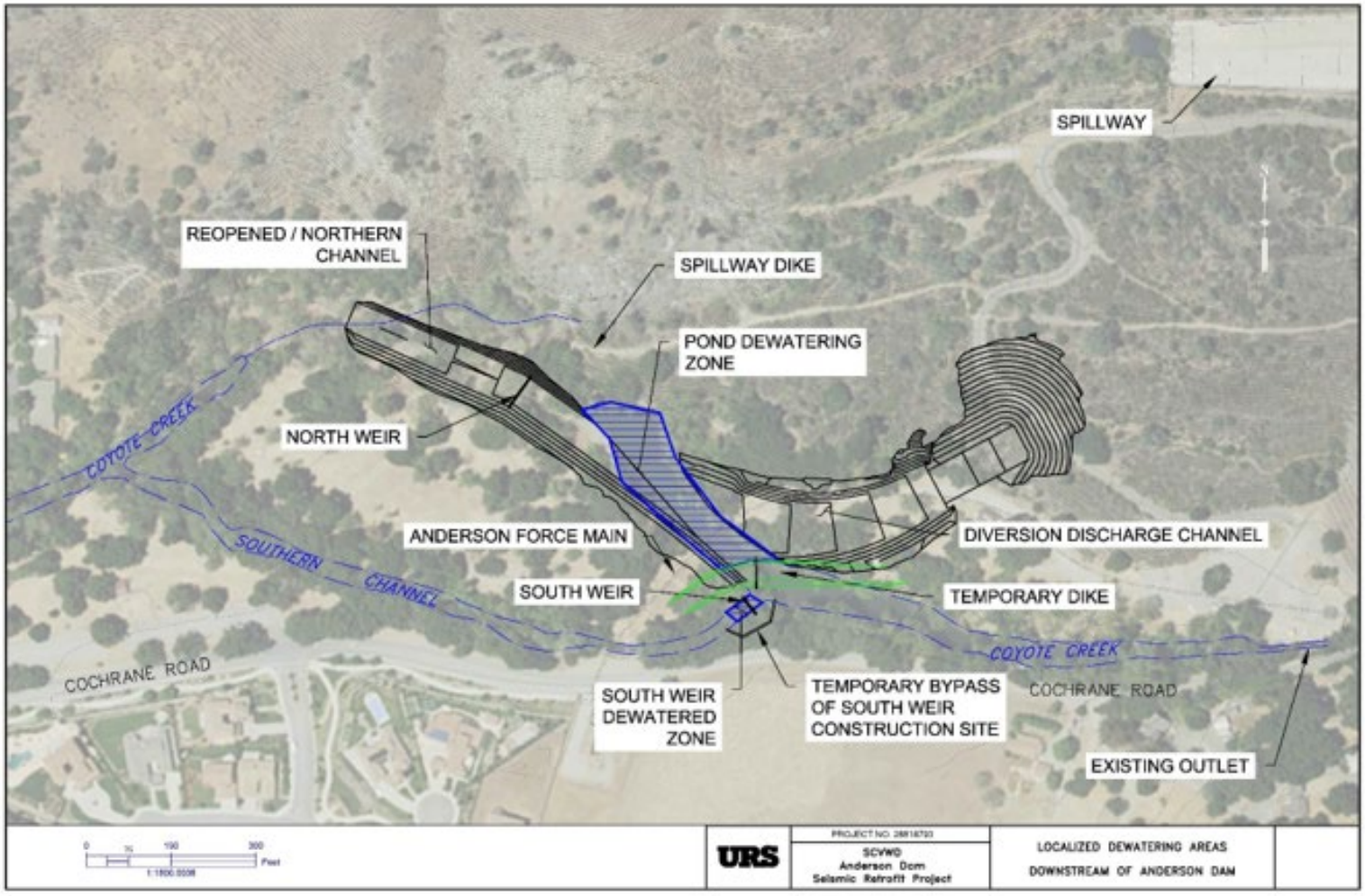
Figure 5: Location of proposed floodwalls between Mabury Road and Highway 101 (Source: Valley Water, 2020g).

The flood management measure proposed for the reach of the Coyote Creek in Figure 5 is a six-foot-tall floodwall on the west bank of Coyote Creek extending from Mabury Road to Highway 101.

Figure 6: Location of proposed flood mitigation measures between William Street Park and Santa Clara Street (Source: Valley Water, 2020g).

The flood management measures proposed for the reach of the Coyote Creek in Figure 6 include the elevation or acquisition of structures located on the shaded parcels as well as the construction of three segments of floodwall, ranging from four to nine feet in height, between structures and the creek.

Figure 7: Location of historic northern channel of Coyote Creek (Source: Horizon Water and Environment, 2020).



2.2.3 Coyote Creek Percolation Dam and Coyote Creek Flood Protection Project

While this Supplemental EA analyzes Valley Water's proposed actions, Commission staff note that a number of the actions concern facilities or features that are not part of the Anderson Dam Project and would not serve project purposes. Valley Water proposes to replace the Coyote percolation dam, which is not a project feature and is located 11 miles downstream of Anderson Dam, with a bladder dam to allow Valley Water greater flexibility in accommodating flows in Coyote Creek. The primary purpose of the Coyote percolation dam is to provide groundwater recharge.[23]

Valley Water also proposes flood management measures to accommodate greater flows in Coyote Creek after the completion of the low-level outlet tunnel, which includes: constructing floodwalls and levees and acquiring or elevating various private properties at least 15 miles downstream of the project. These flood management measures are part of Valley Water's Coyote Creek Flood Protection Project (CCFPP), which Valley Water developed following a flood event in February 2017. Valley Water planned to complete the CCFPP irrespective of these activities at Anderson Dam and states that "[a]ll of the downstream flood management measures proposed in the [Drawdown and Operations Plan] are components of the [Coyote Creek Flood Protection Project]" and the flood control measures described in its FOCP represents forty percent of its CCFPP (Valley Water, 2020g).

Analysis of the environmental effects of the Coyote Creek percolation dam replacement and the implementation of flood protection measures are included in the relevant resource areas below in *Supplemental EA Section 3.0 Environmental Analysis*.

2.3 Staff Alternative with Recommended Measures

The staff alternative includes Valley Water's proposed Reservoir Drawdown and Operations Plan and considers the conservation recommendations and conditions provided by the resource agencies. Commission staff's recommended conditions are discussed in *Supplemental EA Section 3.0 Environmental Analysis* under the relevant resource areas and included as a listing in *Supplemental EA Section 4.1 Staff Recommended Measures*.

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[23] Valley Water provides releases from Anderson Reservoir to effectuate groundwater recharge, which allows the replenishment of groundwater that has been pumped by local water retailers, companies, and individual well owners. Valley Water, *Groundwater Supply*, https://www.valleywater.org/your-water/where-your-water-comes-from/groundwater/groundwater-supply.

3.0 ENVIRONMENTAL ANALYSIS[24]

A general description of the project vicinity is discussed in *October 1 EA Section 3.1 General Description of River Basin.* This Supplemental EA focuses on the remaining aspects of Valley Water's Reservoir Drawdown and Operations Plan including the proposed low-level outlet tunnel and operations, creek channel and bank erosion measures, percolation dam replacement, Coyote Creek flood management measures, and reopening of the historical Coyote Creek channel; and our environmental analysis of these actions organized by resource area below. Under each resource area, the baseline against which the environmental effects of the proposed action and alternatives are compared is a reservoir at 565 ft elevation with normal operating conditions. Each section includes an assessment of the effects of proposed mitigation, protection, and enhancement measures, and any potential cumulative effects of the proposed action and alternatives. Commission staff conclusions and recommended measures are discussed in *Supplemental EA Section 4.0 Conclusions*.

3.1 Scope of Cumulative Effects Analysis

According to the Council on Environmental Quality's regulations for implementing NEPA (40 C.F.R., section 1508.7), a cumulative effect is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

Based on our review in the October 1 EA and this Supplemental EA, we have identified resources including: water quality, aquatic resources, and terrestrial resources, that will be cumulatively affected by the IRRM and Valley Water's proposed Reservoir Drawdown and Operations Plan. The ADSRP is a reasonably foreseeable action which will begin after the construction and operation of the ADTP and is included in our cumulative effects analysis. The October 1 EA noted that the reservoir drawdown is expected to last for numerous years, with a return to a full reservoir not expected until

[24] Unless otherwise indicated, our information is taken from: Valley Water's May 29, 2020 filing of an environmental screening document (Horizon Water and Environment 2020); July 27, 2020 filing with the Commission of its Reservoir Drawdown and Operations Plan (Valley Water 2020a); the July 28, 2020 filing containing responses to comments it received on these documents; and Valley Water's filing dated November 2, 2020 of comments on the October 1 EA.

after the ADSRP is completed in 2030.[25] The effects of a sustained reservoir drawdown is summarized in *October 1 EA Section 3.2 Scope of Cumulative Effects Analysis* and discussed in the specific resource area sections of the October 1 EA.

3.1.1 Geographic Scope

The October 1 EA defined the geographic scope of Valley Water's FOCP to include: Anderson Reservoir and shoreline up to the maximum operating elevation of 627.8 ft; areas of previous instability around Anderson Reservoir which will be prone to landslides; portions of Anderson County Park including the boat launch, a segment of the Lakeview Trail, and lands around Anderson Dam; portions of Coyote Creek County Park including the Live Oak Day Use Area, the Serpentine Trail and segments of the Coyote Creek Trail in proximity to Ogier Ponds and Coyote percolation pond; segments of the City of San Jose's Coyote Creek Trail; Coyote Creek downstream of Anderson Dam to the water temperature logger near N. McCarthy Blvd; Upper Penitencia Creek below Cherry Flat dam to the confluence with Coyote Creek; CVP Pipeline extension's outlet to Coyote Creek; Coyote percolation dam; floodwall, berm, and levee development areas; and impacted parcels along segments of South 17th Street, East William Street, and Arroyo Way in the City of San Jose which are slated for acquisition or elevation of structures. Additionally, staging (Anderson Dam staging areas 1-3, Slide Mitigation Area, Coyote Percolation Dam) and disposal areas (at Anderson Dam) will be included in the analysis. This Supplemental EA makes no changes to the geographic scope.

3.1.2 Temporal Scope

Valley Water began lowering the Anderson Dam reservoir on October 1, 2020 in compliance with the February 20, 2020 order. The reservoir will be lowered to elevation 488 ft (deadpool) and will remain at that level through the construction of the ADTP and until the low-level outlet works are operational, unless authorized otherwise. Valley Water will submit an amendment application with plans and specifications for the ADSRP. This application is currently expected to be filed in early 2022.[26] As Valley Water clarified in a November 2, 2020 filing, the ADSRP work will require the reservoir to be lower than deadpool elevation in order for the dam retrofit construction to take

[25] We clarify here, based on comments provided November 2, 2020 by Valley Water on the October 1 EA, that a reduced reservoir is expected through completion of ADSRP. The full extent of the drawdown during ADSRP has not been proposed yet but will likely be lower than deadpool for some period of time.

[26] Valley Water's monthly progress report filed with the Commission on January 19, 2021.

place. The October 1 EA analyzed the effects of the reservoir drawdown for the IRRM and the exemptee's plans described in the Reservoir Drawdown and Operations Plan. For the purposes of the October 1 EA, we assumed the reservoir will be in a lowered state until the ADSRP is completed, which will be in 2030.[27] We therefore discussed the effects a sustained reservoir drawdown will have on resources in our environmental analysis. We supplement the October 1 EA for analysis of the effects of the construction and operation of the low-level outlet and tunnel (ADTP), reopening of the north Coyote Creek Channel, Coyote percolation dam replacement, and downstream flood control measures. Commission staff will complete a NEPA analysis for the ADSRP once that amendment application is filed and the complete understanding of Valley Water's proposed actions are determined for that action.

3.2 Proposed Action

In this section, we discuss the effect of the IRRM on environmental resources, as Valley Water proposes to implement through its Reservoir Drawdown and Operations Plan. As appropriate, the affected environment discussed in the October 1 EA is supplemented below for each resource. As previously stated, the affected environment is the baseline condition of a 565 ft reservoir elevation and normal project operations. We discuss and analyze site-specific environmental effects and any cumulative environmental issues.

3.2.1 Geologic and Soil Resources

3.2.1.1 Affected Environment

In the October 1 EA, Commission staff described the existing geologic and soil resources at the project, and analyzed the effects of the reservoir drawdown. Aside from dewatering large areas of reservoir bottom with the resultant effects as analyzed in the October 1 EA, there is no change in the affected environment for geologic and soil resources for the purposes of the analysis in this Supplemental EA.

[27] Valley Water's monthly progress report filed with the Commission on September 16, 2020. The January 19, 2021 monthly progress report also notes an estimated completion date of late 2030 for the ADSRP. In a July 28, 2020 filing, Valley Water proposes to operate the reservoir up to an elevation of 543 ft from October 1 through the last day of February; between 543 and 562 ft from March 1 through March 31; and up to 562 ft between April 1 and September 30, following the completion of the new tunnel. However, this proposal is currently under review by the Commission's D2SI staff.

3.2.1.2 Environmental Effects

Construction

Construction of the new tunnel will take place adjacent to and under Anderson dam. In preparation for the work, the exemptee will establish three staging areas and a disposal area. These locations, which currently consists of parks, parking lots, and private property, will be cleared of vegetation or light fixtures, graded if necessary, and covered with stone aggregate or a separation fabric. Additionally, the work will require the construction of 40-foot-wide gravel access road between these areas and to Cochrane Road at the toe of the dam.

Initial excavation work will occur at the downstream portal to prepare the site for tunneling equipment. As construction progresses, the exemptee intends, in this same area, to excavate a new 250-foot-long, 86-foot-wide open channel that will receive water from the proposed tunnel and to enlarge the north channel of Coyote Creek to allow it to safely pass the higher flows expected from the new conduit. Material removed from these sites will be trucked directly to the disposal area located at the south end of the dam, in what is currently the parking lot for the main boat ramp at the Anderson Lake County Park. As construction of the tunnel progresses, the exemptee also intends to extract spoils from the tunnel, dewater them in a slurry treatment facility, temporarily store them at a staging area near the existing outlet, and finally truck the material to the designated disposal area. Depending on the nature of rock encountered, some blasting may be required in order to construct the tunnel and allow a micro tunnel boring machine (MTBM) to excavate and remove the material. By the time all excavation work is completed, the exemptee estimates up to 130,000 cubic yards of spoils will be placed at the disposal area. The exemptee states this material will eventually be placed within the reservoir as part of its seismic retrofit activities.

Nuisance water produced during excavation of the tunnel and north channel will be treated and released into Coyote Creek. The exemptee states it will moisten material loaded into haul trucks and wet or cover spoil piles to limit dust. The exemptee also states it will place berms or silt fences around the piles to limit runoff into Coyote Creek.

Although the staging areas and the disposal pile will be used for the future ADSRP, the exemptee states that for disturbed areas no longer needed for construction, namely the excavated portions along the banks of the north channel, it will install a biotechnical liner to allow for revegetation and implement the measures included in its vegetation plan at the site.

Construction activities near the dam will have a minimal adverse and temporary effect on geology and soil resources. The largest surface disturbances will be caused by establishing staging areas, stockpiling of spoils, and construction of temporary roads. Of

the three staging locations and single disposal area, two are located on existing parking lots and will require no additional disturbance of soils. Although clearing of vegetation and grading of the other staging areas and temporary roads may expose soils to erosion and run-off, effects will be reduced by thoughtful scheduling of activities and placement of aggregate over disturbed soils. The exemptee also intends to install membranes at construction entrances to limit the tracking of soils off-site and onto highways.

Spoils produced during tunnel excavation may contain a large number of fines and be susceptible to erosion by both wind and water. However, the exemptee's proposal to keep this material wetted, both during transport and storage, will help reduce the possibility of fugitive dust emissions. Furthermore, the exemptee's plan to cover the spoils and develop and implement a stormwater pollution prevention plan will reduce the likelihood of the stockpiled material being transported by precipitation into nearby surface waters.

During tunnel construction, Valley Water proposes to install flood management measures along Coyote Creek to accommodate the higher flows that will be possible with use of the new tunnel. These measures consist of: a 350-foot-long, 4-foot-high levee; and seven individual floodwalls totaling 7,700 linear ft and varying in height from 2 to 9 ft. The levee will be 12 ft wide at the top and 28 ft wide at the bottom. The exemptee also proposes to excavate below the footprint of the levee to a depth of 5 ft, and backfill the area with the same material used to construct the levee. In total, the exemptee plans to excavate approximately 1,800 cubic yards of native material to prepare the foundation, and will import approximately 2,800 cubic yards of material to build-up the foundation and construct the levee.

The exemptee intends to install the sheet pile floodwalls using a silent pile driving method, which will limit ground disturbance by not making use of hammering or vibrations. The exemptee will also grade areas around the floodwalls using a compact loader following installation of the sheet pile.

Installing the flood management measures will have a negligible temporary effect on geology and soil resources. The exemptee's proposed method used to install and grade around the floodwalls will likely lead to no meaningful disturbance to soils, and construction of the levee will affect a relatively small area for a brief period of time. Additionally, the related work at the Coyote percolation pond will have a negligible effect on geology and soil resources as the exemptee intends to make use of an existing road for access, an existing gravel lot for a staging area, and the construction activities will primarily occur on the concrete sill of the percolation dam. The exemptee does intend to demolish and replace some concrete at the dam, but it will protect this area from erosion by installing a cofferdam, and use measures to limit soil erosion in the limited construction area.

Operation

Following completion of the new tunnel, primary effects on geology and soil resources will result from the higher outflows at the base of the dam. The new conduit will increase maximum discharge capacity from approximately 500 cfs to 2,500 cfs. Furthermore, the exemptee intends to reopen the north channel of Coyote Creek at the dam, which has generally gone unused since the project was built in 1950. The exemptee intends to discharge flow from the new outlet primarily into the north channel, using a weir and u-shaped invert at the head of the north and south channels respectively, to limit flows in the south channel to an approximate maximum of 500 cfs. The exemptee will armor the new channel conveying water from the new conduit outfall to the creek with riprap, and, as previously mentioned, promote revegetation along the north channel to protect streambanks and beds from the erosive capability of the higher flow regimes.

Operation of the proposed tunnel will result in negligible effects on geology and soils. Through design of its weirs, the exemptee will limit flows in the south channel to historic levels, meaning there will be no change. Alternatively, the north channel will take the bulk of high outflow, though by excavating the channel, promoting revegetation, and installing riprap in particular locations, the exemptee will minimize the risk of erosion along this segment of the stream.

Because of the higher downstream flow from the proposed tunnel, the exemptee expects additional flood effects at areas on Coyote Creek where development, sedimentation, and vegetation growth have restricted its flow capacity. The exemptee's proposed levee and flood walls at these locations will help to restrict Coyote Creek from rising out of its channel and will prevent erosion and disturbances to soils within the natural floodplain but outside the channel. The flood management measures will also prevent beneficial sediment from being deposited within the floodplain, as would occur naturally during floods; however, most of these areas currently consist of roads, residences, business, and parks, and are artificially maintained. Overall, the flood management measures will provide a long-term moderate benefit to geology and soil resources.

3.2.2 Water Quantity

3.2.2.1 Affected Environment

Through the exemptee's implementation of its proposed reservoir drawdown, current conditions at the project are similar to those considered in the environmental effects analysis of the *October 1 EA Section 3.3.2 Water Quantity*. That is to say, while the characteristics of inflow into Anderson reservoir have remained the same and are described in the October 1 EA, the exemptee is no longer storing water as it normally does, but is now drawing down and attempting to maintain the reservoir at its deadpool

elevation of 488 ft. It is doing so by initially making releases that exceed total reservoir inflow by approximately 100 cfs. The restrictions on releases will continue until possible landslide locations along the reservoir rim have been sufficiently stabilized or determined to not be a concern. At the deadpool elevation, the reservoir will have a surface area of 150 acres, a capacity of 2,820 ac-ft, and a maximum depth of approximately 38 ft.

Because the discharge capacity of the existing conduit is 295 cfs at the deadpool elevation, high inflow events associated with winter storms that exceed that flow rate will lead to storage of water and a rise of the reservoir surface elevation beyond the deadpool elevation of 488 ft. The reservoir will continue to rise until inflow subsides and decreases below the achievable flow rate of the conduit at that elevation, at which point the reservoir would drop back down to the deadpool elevation.

Within Coyote Creek immediately below the dam, streamflow will reflect inflow into Anderson reservoir up to the capacity of the existing conduit. During the winter, project inflow averages approximately 100 cfs but is frequently greater during storms. Because it is extremely unlikely the reservoir surface would reach the elevation of the ungated spillway during the drawdown, discharge from the project is limited to the capabilities of the existing conduit, which ranges from 295 to 500 cfs. During the summer, discharges from Anderson dam will generally be around 2 to 10 cfs. Flow within the creek will be supplemented by imports from the Central Valley Project and the State Water Project released through the Coyote discharge line and the CVP extension as described in the October 1 EA.

3.2.2.2 Environmental Effects

During tunnel construction, the exemptee will continue to use its existing conduit to make releases. The construction period is expected to last from April 2021 until December 2023, and during this time, discharges will be identical to those described in the affected environment section above.

Once the tunnel is complete, it will provide a maximum discharge capacity of 2,000 cfs, which is in addition to the maximum discharge of 500 cfs that can be released through the existing conduit. Discharges from the new tunnel will be released into the historical north channel of Coyote Creek, whereas the existing conduit will continue to release water into the south channel. Because these channels are hydraulically connected at the toe of the dam and releases could flow into either branch, the exemptee proposes to construct a 72-foot-long weir at the head of the north channel and a 5-foot-wide, U-shaped channel invert at the head of the south channel in order to limit flow in the south channel to the historical maximum of approximately 500 cfs. With these structures, the

exemptee intends to divert any flow below 500 cfs into the south channel, while any discharge from the conduits that exceed that amount will pass through the north channel.

As currently authorized, the exemptee is restricted to holding the reservoir at an elevation of 488 ft, in which case, it will leave the existing conduit fully open and operate the new tunnel at its maximum capacity if the reservoir surface exceeds 488 ft as a result of high inflow. With the new tunnel and while at the deadpool elevation, the project will operate as a run-of-river project at inflows up to approximately 1,800 cfs.[28] At a reservoir elevation of 543 ft,[29] the possible flow rate for discharge from the dam will be approximately 2,385 cfs, and at an elevation of 562 ft, the possible rate of discharge will be approximately 2,420 cfs.[30]

Although the creek below the dam has experienced high flows from spill events, such flows are infrequent. Following construction of the new tunnel however, the exemptee may be able to release flows in excess of 2,000 cfs as part of its routine operation, not increasing the magnitude of high flow events but increasing the number of times high flows affect facilities or nearby lands, possibly requiring the owner of the land or facility to adapt or take other actions. As an example, because of the increased likelihood of downstream flows exceeding the 800 cfs design capacity at its Coyote percolation dam, the exemptee intends to replace the steel flashboards with a pneumatic bladder which can be lowered and raised automatically, removing the need to dispatch personnel to the site for each high flow event.

Moreover as we have said, following a flooding event in February 2017, the exemptee developed the CCFPP to install or implement a number of measures intended to protect areas and structures within San Jose that had been damaged during the February 2017 incident from a flood of similar magnitude in the future. This event constituted a 20 to 25 year flood. The exemptee indicated that it intends to complete the measures in the CCFPP in 2026. While developing its FOCP and acknowledging the

[28] This value comprises the approximately 300 cfs flow capacity of the existing outlet at 488 ft and the approximately 1,500 cfs flow capacity for the new tunnel at the same elevation.

[29] As discussed in footnote 27, the exemptee has proposed a reservoir operating scenario following seasonable maximum elevations of 543 or 562 ft. However, this proposal is currently under review by the Commission's D2SI staff.

[30] The new tunnel is expected to reach its design discharge of 2,000 cfs at a reservoir elevation of 520 ft. Any increase in discharge as the reservoir rises above that elevation is due solely to increases in flows through the existing conduit.

proposed tunnel would increase project discharge, excepting infrequent use of the existing spillway, the exemptee evaluated the effect this greater flow may have on flooding and the relationship to measures included in the CCFPP. The exemptee assessed water elevations in Coyote Creek at the CCFPP measures using a discharge of 2,500 cfs from the project combined with contributions from four tributaries each experiencing 10 year flood events.[31]

As we have said, Valley Water's proposed Coyote Creek flood management measures include the construction of one levee, the installation of seven sheet pile floodwalls, and the purchase or elevation of ten structures on nine properties. Several commenters disagree with the exemptee's proposal with regard to the purchase or modification of private homes, and suggest the exemptee instead improve efforts to clear vegetation and debris out of the Coyote Creek channel to increase its ability to pass flow without exceeding its banks. Commenters also state that open lands within the watershed that have been preserved, in part, to help attenuate floods along with the temporary duration of the proposed work, could reduce the flood risk to the identified properties to an acceptable level, and no action needs to be taken.

Flood events come about through a complex interplay of meteorological and hydraulic conditions, and are predicted using available, though incomplete, data and precipitation and hydrology models. As such, there is a great deal of uncertainty in forecasting floods. Furthermore, though efforts by the exemptee and others to clear debris from the creek channel and to preserve open land may reduce the frequency of flooding, they will never prevent floods at any area along the creek given a sufficiently large or long duration flood event. Any measure to protect against flooding requires an analysis to estimate possible risk of flooding, a determination of what risk is acceptable, and an evaluation of what protections measures are appropriate. The analysis used by the exemptee to determine the risk it finds tolerable and its prospective measures are described above. Because the analysis and choice of protection measures are at the discretion of the exemptee and lie outside the Commission's jurisdiction, it is beyond the scope of this supplemental EA to assess them.

Assuming the exemptee begins the water year with the reservoir at an elevation of 543 ft, its proposed operating scenario would significantly modify the likelihood of particular flow levels being released from the dam. For example, a discharge of 1,300 cfs is estimated to occur in 94 out of 100 years, or have a 94 percent chance of occurring in any one year if the reservoir were held at deadpool, whereas it will occur in 92 out of 100

[31] The exemptee's analysis is described in its November 2 and December 3, 2020 filings. The exemptee recognizes its analysis is conservative but indicates it is advisable to use the estimate due to unknown hydrology and effects from debris and vegetation within the channel which could impede flow and raise the water elevation.

years (92 percent chance in any one year) if the exemptee were allowed to implement its proposed operating scenario. However, a flow of 1,600 cfs will be exceeded in 81 out of 100 years (81 percent chance) with the reservoir at deadpool and will be exceeded in 90 out of 100 years (90 percent chance) under the proposed operation. As flows increase, the differences between the two operating scenarios result in different likelihoods of occurrence. For example, a discharge of 2,000 cfs is expected to be exceeded in 66 out of 100 years (66 percent chance) with the reservoir maintained at deadpool, while it is calculated to be exceeded in 88 out of 100 years (88 percent chance) under the proposed operating scenario. However, these values assume the reservoir surface never falls below 543 ft. The proposed operating scenario will give the exemptee the flexibility to actively drawdown the reservoir in anticipation of a forecasted rain event, or allow the reservoir to rise during a rain event if no subsequent storms are forecasted, and it could safely release water at a later time. In this way, the exemptee will still be required to release flows that generally exceed most historical releases, but the proposed scenario could give it the ability to somewhat diminish particularly damaging flood peaks. Furthermore, although combined discharges of 2,500 cfs from the existing and proposed conduits will be possible, it will require the reservoir to reach its full pool elevation, which is extremely unlikely.

Operation with the new tunnel will result in an adverse moderate effect on water quantity. Similar to operation during construction of the tunnel, the exemptee will be unable to use the regular storage capacity of the reservoir. Although under the proposed operating scenario, it will be able to maintain an emergency reserve of 20,000 ac-ft and seasonally store an additional 10,000 ac-ft for beneficial uses. Once the tunnel is completed, under either the current or proposed operating scenarios, the exemptee will be able and required to release higher flows to maintain its required elevations. Hence, not only will the storage used for water supply be unavailable or restricted, but the project will generally no longer attenuate some inflows that are above 500 cfs. As a result, high flows will occur downstream at a rate greater than they have in the past. However, because the reservoir is not expected to reach the elevation of the spillway crest, the maximum discharge from the dam will be less than 2,500 cfs, and not significantly greater as has occurred during spill events.[32]

The Coyote Creek flood management measures would generally have a slight beneficial effect. They would limit the amount of water that could adversely affect structures in certain areas and prevent flooding. Alternatively, the levee and floodwalls would restrict water to the creek channel only in particular locations. By preventing water from leaving the channel, and serving as smooth boundaries to flow, the measures will both increase the volume and velocity of water in the creek. In this way, the

[32] The peak discharge from the project during the 2017 flood event was approximately 7,400 cfs.

measures could cause or exacerbate flooding at downstream areas that are not protected by flood control measures or will require upgrades to existing control measures.

The exemptee's proposal to replace flashboards with a pneumatic gate system at the Coyote percolation pond would not affect water quantity at the facility. Following the modification, the dam would continue to impound water at flows below 800 cfs to benefit groundwater recharge, while at flows greater than 800 cfs, the dam would not impound water. The only difference is that personnel currently remove the flashboards to allow for higher flows, whereas in the future, the pneumatic gate system would simply deflate, allowing the gates to lie flat in order to pass high flows.

3.2.3 Water Quality

3.2.3.1 Affected Environment

The Commission's *October 1, 2020 EA, Section 3.3.3 Water Quality* describes the water quality of the Anderson Reservoir and downstream Coyote Creek, including the CWMZ. It also describes the environmental effects of the reservoir drawdown and implementation of the CVP extension and chillers.

Temperature

The drawdown of Anderson Reservoir will result in a reduction or elimination of the reservoir's coldwater pool. Streamflow in Coyote Creek through the drawdown period will have elevated water temperatures in the summer and fall relative to the existing condition for two reasons. Once the reservoir is drawn down to elevation 488 ft, all releases will be from the surface of the reservoir, which is expected to have a higher water temperature due to warming of the surface. Secondly, summer flow during construction and operation of the new tunnel will rely more on releases of imported water to supplement local flow, which will be released, as it currently does, downstream of Anderson Reservoir from the Coyote discharge line, to support groundwater recharge and aquatic habitat. Valley water proposes to release 5 to 30 cfs of imported water via the Coyote discharge line. The amount of flow released will depend on the time of year, the temperature of flow, the amount of native water available, and hydrology at the time of release. The anticipated daily maximum temperatures of imported water that will be discharged downstream of Anderson Dam, depending on water year type and ambient temperatures, is estimated to be 24°C to 26°C from July through October (Stillwater Sciences, 2020).

To offset this warming effect and minimize effects to groundwater recharge and warm water habitat downstream, Valley Water will construct the CVP extension to release imported water downstream of Ogier Ponds, and to release lower flows of warm

imported water into the CWMZ. Valley Water will also chill imported water before discharging it into Coyote Creek at the upstream end of the CWMZ. Valley Water proposes to cool up to 10 cfs of the imported water by 7ºC to maintain water temperatures in a range suitable for steelhead. Water flowing through the Coyote discharge line will pass through three parallel chillers. With the proposed use of the CVP extension to carry larger volumes of imported water for release downstream of the CWMZ, along with implementation of chillers for imported water released at the upstream end of the CWMZ, it is likely that temperatures will average 16ºC at the base of Anderson Dam, and consequently, the 18ºC target at the end of the CWMZ (for flow entering Ogier Ponds) will likely be attainable during the summer.

However, prior to completion of the CVP extension, the large volume of imported water that will need to be released into the CWMZ will make it impractical to reduce water temperatures to near existing conditions. The average temperature of imported water exceeds 20°C from July through October. Therefore, when the reservoir is drawn down and before the CVP extension is constructed, an increase of temperature in the CWMZ is expected. Until the new CVP extension and the chillers are in place, a temporary adverse impact to water temperature is expected. Once project construction is completed and Anderson Reservoir resumes normal operating procedures, water temperature is anticipated to return to pre-drawdown condition.

Dissolved Oxygen

During the drawdown of Anderson Reservoir, when water will be released through the lower and middle ports, it is expected that water will be hypoxic during the summer. However, Valley Water has observed from water quality spot checks in Coyote Creek that dissolved oxygen is not usually limited in moving water because the release of the water and instream flow reoxygenates the water within Coyote Creek.

Sedimentation

Drawdown of the reservoir to 488 ft will expose currently inundated soils lacking vegetation. These soils will become susceptible to erosion, and thereby likely increase the levels of total suspended solids (TSS) (e.g., fine sediments) in the reservoir water column. The estimated volume of sediment in the Los Animas Creek and Coyote Creek channels above elevation 488 ft is approximately 1 million cubic yards (mcy) and 0.5 mcy, respectively. The drawdown process will mobilize and transport some of this sediment, and water with elevated TSS will likely be subsequently discharged to Coyote Creek, downstream of Anderson Dam. Additionally, storms and precipitation that occur during or following reservoir drawdown could mobilize the sediment, ultimately leading to temporary adverse water quality effects downstream.

3.2.3.2 Environmental Effects

Anderson Dam tunnel construction and reopening of north channel.

Construction of the new low-level outlet tunnel and reopening of the historical north Coyote Creek channel will involve several different activities that have the potential to adversely affect surface water and groundwater quality. The potential adverse effects on surface water and groundwater quality are described below, however, these effects will be minimized with implementation of BMPs and several construction related plans.

Construction actives for the new tunnel and reopening of the north channel will include ground disturbing actives such as clearing, grading, and preparing staging and stockpile areas. Construction of new access and haul roads during site mobilization will involve substantial ground disturbance and operation of heavy equipment. These activities are unlikely to result in erosion and subsequent transport/runoff of eroded materials to surface waterbodies as Valley Water will implement several measures, described below, that will avoid or minimize these potential effects.

The proposed modifications to the Coyote Creek channel could cause surface water pollution given that construction equipment will need to be operated within the creek channel and on the bank. Additionally, construction equipment could spill or leak hazardous materials (e.g., fuel, oil, lubricants), which could subsequently be transported to surface waterbodies or groundwater. The risk of surface water pollution will be most critical for construction activities conducted near Coyote Creek.

Excavation and tunneling activities during construction of the Anderson Dam tunnel will also use a variety of heavy mechanical equipment, which will use hazardous materials in their operation, and could track sediments across the construction site, where it could be discharged via site runoff. Storage of spoils from the excavated tunnel could also result in adverse water quality effects if off-site movement of sediments were to occur. As the tunneling activities will occur on the right dam abutment, immediately upstream of the northern channel of Coyote Creek, any spilled hazardous materials or unstable/eroded soils will have a high probability of entering Coyote Creek. Fine sediments can adversely affect beneficial uses in Coyote Creek, such as spawning habitat for fish species found in Coyote Creek. Hazardous materials commonly found in construction equipment can cause adverse effects to aquatic species (*Supplemental EA Section 3.2.4.2 Aquatic Resources*). However, Valley Water will implement several measures, described below, that will avoid or minimize these potential effects.

During excavation, waste material will be temporarily stockpiled in a designated disposal area in the Anderson Lake County Park boat ramp parking area. Once construction of the low-level outlet is complete, it is estimated the disposal area will

contain up to 130,000 cubic yards of material. Additionally, approximately 15,000 cubic yards of dredged lake sediment from the reservoir inlet will be moved about 800 to 1,000 feet upstream of the tunnel where the boring ends. Valley Water will use silk turbidity curtains to mitigate temporary effects to water quality during dredging operations.

Use of the MTBM for creation of the lake tap pipe upstream of the dam could also cause surface water quality effects. The MTBM will be operated from a receiving area that will be excavated from the reservoir bed, and the MTBM will require bentonite clay drilling fluid to reduce friction during the tunneling process. If a frac-out were to occur during construction of the lake tap, this drilling fluid could be released into the reservoir, thereby polluting the water and adversely affecting aquatic life. Additionally, improper management of the cuttings from the MTBM tunneling process could potentially lead to pollution of surface water and groundwater quality (e.g., off-site movement of slurry or leaching of stockpiled debris piles).

Nuisance groundwater will be generated during excavation of the portal and tunnel, dewatering of the backwater area formed following installation of the dike within Coyote Creek, relocation of the Anderson Force Main, and re-opening of the northern channel. Nuisance groundwater will be collected and pumped to an on-site water treatment system and treated before being released back into Coyote Creek. The volume of groundwater that will be produced during tunneling is anticipated to be approximately 100 gallons per minute (gpm). Groundwater inflows into the northern channel of Coyote Creek may be greater. Valley Water proposes to provide a water treatment system capable of treating up to 400 gpm.

While the Anderson Dam tunnel construction activities will create potential for adverse effects to surface waters and groundwater, as described above, Valley Water proposes to implement several measures that will avoid or minimize these potential effects. Valley Water will obtain coverage under the Stormwater Construction General Permit Order No. 2009-009-DWQ (Construction General Permit), which requires preparation and implementation of a Stormwater Pollution Prevention Plan. The plan must include erosion control and hazardous materials management, BMPs, including materials and protocols for hazardous materials spill response. In addition to the Construction General Permit, the proposed action will be subject to a variety of federal, state, and local laws and regulations related to hazardous materials management and disposal. The proposed action also will obtain coverage under Section 404 and 401 of the CWA and Section 1600 of the California Fish and Game Code (Lake or Streambed Alteration Agreement). All of these permits will include measures for avoidance and minimization of potential effects to water quality and riparian habitat.

Additionally, Valley Water will be implementing several plans that will minimize effects on surface water and groundwater quality. These include a Dewatering and

Sediment Management Plan, Slope Stability Plan, Stormwater Pollution Prevention Plan, Reservoir Bank and Rim Stability Mitigation and Monitoring Plan, Frac-Out Prevention Plan, Groundwater Management Plan, and Water Quality Sampling Plan.[33] In addition, Valley Water will implement BMPs that will minimize effects on surface water and groundwater quality from construction activities. These include: proper vehicle equipment fueling and maintenance; proper hazardous material management; spill prevention measures; control of sediment and turbidity of discharges; evaluation of the use of discharge surface protection measures such as armoring and flow diversions; prevention of water pollution; and prevention of stormwater pollution. Valley Water plans to monitor turbidity in areas of active construction within the CWMZ and beyond, such as the construction of the north channel, the replacement of the Coyote percolation dam, and the installation of the CVP extension outfall.

Given implementation of the permits mentioned above, as well as the above-listed plans, BMPs, other environmental protection measures, as well as implementation of the WQC conditions, there are no anticipated adverse effects to water quality caused by construction of the tunnel and reopening of the north channel.

Anderson Dam Tunnel Operations

The Anderson Dam tunnel will be used primarily to allow passage of high flows. The exposed area of the reservoir above elevation 488 ft are highly susceptible to erosion. Sediment will likely be transported through the tunnel during large storm events. This could lead to sediment deposition on spawning grounds and increased turbidity. To reduce the potential effects associated with the release of water with high TSS, Valley Water has designed the tunnel to include a 2-foot-high edge on the trash rack to trap course sediment. Also, the recontoured Coyote Creek will include pools upstream of the weirs in the northern and southern channels to allow sediment to settle out.

As discussed in the Commission's *October 1 EA Section 3.3.3.2, Water Quality Environmental Effects*, Valley Water conducted sediment transport modeling for Anderson Reservoir and Coyote Creek. The study concluded that due to the limited capacity of the existing and proposed outlets, any significant storm event will cause an increase in the water surface elevation that will inundate erodible sediments. Concentrations in the reservoir will then decrease due to settling. Most erosion occurs at the beginning of the storm events when the flows are high but before the reservoir water level rises high enough to inundate the erodible sediments in the north and south arms. The concentration in the reservoir then decreases as the sediment settles in the reservoir. Small and medium storms can cause larger sediment concentrations since the reservoir fills less than during larger storms.

[33] The plans required by the WQC include similar actions.

The model also concluded that sediment releases from the reservoir deposited roughly 6 to 16 percent of the suspended sediments in the 4-mile length of Coyote Creek, between Anderson Dam and Ogier Ponds. Most of the deposition, ranging from 17 to 46 percent of the suspended sediment load released from the reservoir, will occur in Ogier and Metcalf Ponds. By the time Coyote Creek reaches Highway 237 at Milpitas, between 40 and 80 percent of the suspended sediment releases from the reservoir will be deposited.

A reservoir outflow of 2,500 cfs is much smaller than flows anticipated during storm events (e.g., the two-year event peak flow is 6,100 cfs); therefore, the reservoir elevation is expected to increase (beyond deadpool) during these storms (URS, 2020b). The larger outlet discharge capacity allows the reservoir to be drawn down to elevation 488 ft faster following a storm event. Based on the modeling, with a reservoir elevation of 488 ft and discharge from the existing outlet and the new tunnel, high flow events will result in an increase in TSS in Coyote Creek above existing conditions. This will cause short-term adverse effects to water quality in Coyote Creek downstream of the dam as the reservoir is being lowered to 488 ft. As ordered in the Commission's October 1, 2020 Order, Valley Water is required to develop and implement a Sediment Discharge Monitoring Plan to monitor suspended sediment discharges from Anderson Reservoir, and to monitor the effect of the discharges on Coyote Creek downstream of the dam, which will inform adaptive management of measures to minimize the discharge of suspended sediment.

The new tunnel will increase the discharge capacity of the dam, allowing flow up to 2,500 cfs, which is more than the current maximum release capacity of 500 cfs from the existing outlet works. To accommodate the increased flow rates through the existing outlet and the new dam tunnel, Valley Water will reopen the historical northern channel of Coyote Creek that was decommissioned during original dam construction. The discharge flows will be distributed between the two channels, up to 2,500 cfs, so that the southern channel would operate with flows at or less than historical release rates. The distribution of flow between the two channels would be achieved by construction of a 72-foot-wide sharp-crested weir at the head of the northern channel and a 5-foot-wide u-shaped channel invert at the head of the southern channel. The distribution of flows between the northern and southern channels will minimize the potential for erosion of the southern channel. To prevent extensive channel bed and bank erosion during such high flow releases, which would have the potential to degrade water quality, the northern channel will be lined with an engineered fill, and the channels will be modified using biotechnical stabilization techniques that allow for revegetation. Use of the northern channel will not affect water quality in Coyote Creek.

Coyote Percolation Dam Replacement

Valley Water will isolate and dewater the Coyote percolation dam work area with installation of temporary upstream and downstream cofferdams made of sheet-piles or impermeable earthen material and dewatering pumps, as needed. A pipeline will convey up to 20 cfs around the work area and through the radial gates opening by gravity flow. Construction activities associated with the replacement of the Coyote percolation dam could loosen and expose soil and channel material, increasing the potential for erosion and sediment transport. In addition, any equipment operated near or within the channel associated with installation or dewatering activities could affect water quality via spills or leaks. Valley Water proposes to implement BMPs that will minimize effects to surface waters and beneficial uses. With these BMPs in place, as discussed above, along with implementation of the conditions of the WQC, there are no anticipated adverse effects to water quality.

Coyote Creek Flood Management Measures

Construction activities associated with the installation of floodwalls, a levee, and elevation of ten structures could loosen and expose soils and channel material, increasing the potential for erosion and sediment transport. In addition, any equipment operated near the channel could affect water quality via spills or leaks. Valley Water proposes to implement BMPs that will minimize effects to surface waters and beneficial uses, as discussed above. With these BMPs in place, along with implementation of the conditions of the WQC, there are no anticipated adverse effects to water quality.

3.2.4 Aquatic Resources

The October 1 EA analyzed effects of drawing down the Anderson Reservoir, avoidance and minimization measures related to the drawdown (including bank and rim stability improvements, modification of the existing intake structure, imported water releases and construction and operation of the CVP extension, and steelhead and fish avoidance and minimization measures) on the fisheries resources, and aquatic habitat in Anderson Reservoir and Coyote Creek downstream of Anderson Dam (*October 1 EA Section 3.3.3 Aquatic Resources*). The October 1 EA determined that the Anderson Reservoir drawdown will have a temporary adverse effect to fish due to stranding in pools with poor water quality, reduction in habitat connectivity and habitat suitability, mortality or injury related to entrainment through the unscreened intake, and capture and handling stress during the fish rescue efforts. Further, the October 1 EA determined that anadromous Pacific lamprey and Chinook salmon in the Coyote Creek downstream of Anderson Dam will be adversely affected by water quality and habitat degradation resulting from increased temperatures and sedimentation during the drawdown and with the release of imported water, while other fish adapted to or tolerant of warm water or turbid conditions not likely to be affected by the water quality and habitat conditions.

Further, the October 1 EA examined the effects of altered flows and determined that the adverse effects of dryback due to low summer flow will be minimized with the use of imported water, and the higher flows during winter or following precipitation events will likely be beneficial for migratory fish. The October 1 EA did not identify any substantial negative effects to aquatic resources through construction activities associated with CVP pipeline or modification of the existing intake, and determined that certain mitigation measures proposed by Valley Water, including use of imported water to reduce potential for dryback and fish rescue and relocation efforts to reduce exposure to impaired habitat conditions, would benefit fish and aquatic resources.

Commission staff recommended in the October 1 EA that Valley Water develop a Sediment and Turbidity Monitoring Plan, a Water Temperature Monitoring Plan, and an Invasive Species Plan. The October 1 EA did not specifically analyze the effects to fisheries and aquatic resources from actions proposed by Valley Water including: constructing and operating the low-level outlet tunnel; creek channel and bank erosion measures; replacing the Coyote percolation dam; Coyote Creek flood management measures; and reopening of the historical Coyote Creek channel.

The October 1 EA also did not review benefits to fisheries and aquatic resources that would be provided by Valley Water's compliance with the conditions of the WQC issued by the Water Board on November 9, 2020. Further, the sections below respond to comments received on the October 1 EA pertaining to aquatic resources.

3.2.4.1 Affected Environment

The fishery and aquatic resources within Anderson Reservoir and Coyote Creek are described in detail in the *October 1 EA Section 3.3.4.1 Aquatic Resources*, as modified here in response to comments received, and with additional information as necessary to describe the affected environment for the analysis of effects Valley Water's proposal. Along with these modifications, the *October 1 EA Section 3.3.4.1 Aquatic Resources* adequately describes the aquatic resources that would be affected by the construction and operation of the low-level outlet tunnel, channel and bank erosion measures in Coyote Creek, replacement of the Coyote percolation dam, Coyote Creek flood management measures, and reopening of the historical Coyote Creek channel proposed in Valley Water's Plan.

Based on comments received from Valley Water on November 2, 2020, Pacific lamprey and Central Valley (CV) fall-run Chinook salmon are both likely to occur in the CWMZ, and Table 1 has been revised to show their presence in this reach. In the October 1 EA we incorrectly identified CV fall-run Chinook salmon as federally threatened in Table 1, which has been revised to reflect their unlisted status. The text of the October 1 EA identifies CV fall-run Chinook as a California Department of Fish and Wildlife Species of Special Concern and as a NMFS species of concern (NMFS 2004),

and we clarify here that the NMFS designation applies only to naturally spawned populations and that the Coyote Creek is not included in the areas designated by NMFS or California Department of Fish and Wildlife (California DFW) for the species. Valley Water's November 2, 2020 comments also document that the Chinook salmon in Santa Clara County are of hatchery origin, based on historical occurrence data, genetic testing, and the presence of adipose fin-clipped fish in the system (Garcia-Rossi and Hedgecock 2002; Garza and Pearse 2008). We have corrected Table 1 to reflect the hatchery origin of Chinook in the Coyote Creek, while recognizing NMFS's comments dated June 29, 2020 that Chinook have a historic presence in some San Francisco Bay tributaries and can be categorized as a native species in Coyote Creek. Additionally, although CV fall–run Chinook salmon are not listed under ESA, hatchery-origin fall-run Chinook salmon are considered under the Pacific Coast Salmon Fisheries Management Plan (Pacific Coast Salmon FMP) (PFMC 2014) and are covered under MSA. Coyote Creek from San Francisco Bay to Anderson Dam is designated as EFH for the Pacific Coast Salmon FMP, and therefore their distribution, life history, and habitat requirements as discussed in the *October 1 EA Section 3.3.4.1 Aquatic Resources* are still relevant to the present analysis of EFH (*Supplemental EA Section 3.3.6 Threatened and Endangered Species and Essential Fish Habitat*) and as analyzed in the October 1 EA.

Table 1: Fish found in Coyote Creek CWMZ and from Ogier Ponds to Highway 237 by family (Source: Valley Water 2020a, as modified by Commission staff).

Common Name	**Origin**	**Status**	**CWMZ**	**Ogier Ponds to Highway 237**	**Trophic Guild**	**Tolerance**
Petromyzontidae (lamprey)						
Pacific lamprey	Native	CSSC	X	X	Det	M
Salmonidae (salmon and trout)						
O. mykiss, CCC DPS	Native	FT	X	X	Invert	I
Chinook salmon, CV fall run	Native; Hatchery Stray	CSSC	X	X	Invert	I

Common Name	Origin	Status	CWMZ	Ogier Ponds to Highway 237	Trophic Guild	Tolerance
Cyprinidae (minnows)						
Sacramento Hitch	Native	CSSC	X	X	Plank	M
California roach	Native			X	Omn	M
Sacramento blackfish	Native			X	Plank	M
Sacramento pikeminnow	Native			X	Inv/Pisc	M
Common carp	Non-native		X	X	Omn	T
Goldfish	Non-native			X	Omn	T
Red shiner	Non-native			X	Omn	T
Golden shiner	Non-native			X	Plank	T
Fathead Minnow	Non-native			X	Detr	T
Catostomidae (suckers)						
Sacramento sucker	Native		X	X	Omn	M
Embiotocidae (surfperch)						
Tule perch	Native			X	Inv	I
Poeciliidae (livebearers)						
Western mosquitofish	Non-native			X	Inv	T
Atherinidae (silversides)						
Inland silverside	Non-native			X	Plank	M

Common Name	Origin	Status	CWMZ	Ogier Ponds to Highway 237	Trophic Guild	Tolerance
Centrarchidae (sunfish)						
Largemouth bass	Non-native		X	X	Pisc	T
Spotted bass	Non-native		X		Pisc	M
Green sunfish	Non-native		X		Inv	T
Pumpkinseed	Non-native			X	Inv	T
Bluegill	Non-native			X	Inv	T
White crappie	Non-native			X	Inv/Pisc	T
Cottidae (sculpin)						
Prickly sculpin	Native		X	X	Inv	M
Fundulidae (killifish)						
Rainwater killifish	Non-native			X	Inv	T
Gasterosteidae (stickleback)						
Threespine stickleback	Native		X	X	Inv	M
Gobiidae (goby)						
Yellowfin goby	Non-native			X	Inv/Pisc	T

Based on Valley Water 2020a, Moyle 2002, May and Brown 2002, and Leidy et al 2011. Origin: Native, Non-native, or Hatchery Stray. Status: FT=Federally Threatened; CSSC= California Species of Special Concern. Trophic guild: Det=detritivore; Inv=invertivore; Inv/Pisc=combination invertivore and piscivore; Pisc=piscivore; and Plank=planktivore. Tolerance to environmental degradation: I=intolerant; M=moderately tolerant; T=tolerant.

The October 1 EA described the pool-and-weir fishway located at the Coyote Creek percolation pond (*October 1 EA Section 3.3.4.1 Aquatic Resources*), located 11

miles downstream of the Anderson Dam, but did not fully describe the Coyote percolation dam itself. The Coyote percolation dam is a steel panel flashboard dam installed on a concrete apron and was constructed in 1937. At the south side of the dam, two 10-foot-wide by 11-foot-high radial gates can be raised or lowered to control flow released from the percolation pond. The percolation pond is managed for groundwater recharge, and the water level is not constant. The Coyote percolation dam is rated to safely handle flows up to 800 cfs and prior to large storm events, Valley Water uses an excavator to remove and re-install flashboards prior to and following large storm events (Valley Water 2020a).

On April 8, 1997, Valley Water entered into a Memorandum of Understanding (MOU) with the California Department of Fish and Game (California DFG)[34] (MOU No. 0228-97), which required an operational fishway at the Coyote percolation dam by September 1999. The fishway at the Coyote percolation dam was designed in consultation with NMFS and California DFG and constructed in 1999. As the percolation dam is not a project feature (*Supplemental EA Section 2.2.3 Coyote Creek Percolation Dam and Coyote Creek Flood Protection Project*), Valley Water was not required to notify the Commission regarding construction of the dam, nor was Valley Water required to provide passage designs and specifications, operation and maintenance plans, or effectiveness studies to the Commission for approval. Valley Water is also a party to the Fisheries and Aquatic Habitat Collaborative Effort Agreement (FAHCE agreement), which includes future actions to improve fish passage, among other activities.[35] Current information indicates the pool and weir ladder is operational for flows up to 800 cfs through a combination of the fish ladder and operation of radial gates (Table 2). The capacity of the fish ladder is 50 cfs; for flows above 50 cfs, the radial gates are opened to allow water to pass the facility (Table 2) (Stillwater Sciences 2020). Based on existing hydrology, during the period of upstream steelhead migration in February and March of any given year, flows of 50 cfs have an approximately 23 percent exceedance probability, and flows of 800 cfs have an approximately 4 percent

[34] California DFG changed its name to California DFW on January 1, 2012.

[35] Separate from the Commission's licensing actions, in 2003, a group of signatories entered into the FAHCE agreement including: Valley Water, FWS, NMFS, the California DFG, the Guadalupe-Coyote Resource Conservation District, Trout Unlimited, the Pacific Coast Federation of Fishermen's Associations, and CalTrout. To date, this agreement has not been ratified, although Valley Water is implementing some of the measures discussed in the agreement. Valley Water's November 2, 2020 comments clarified that it does not intend to seek Commission approval of the FAHCE agreement and states that it is an off-exemption agreement regarding water rights.

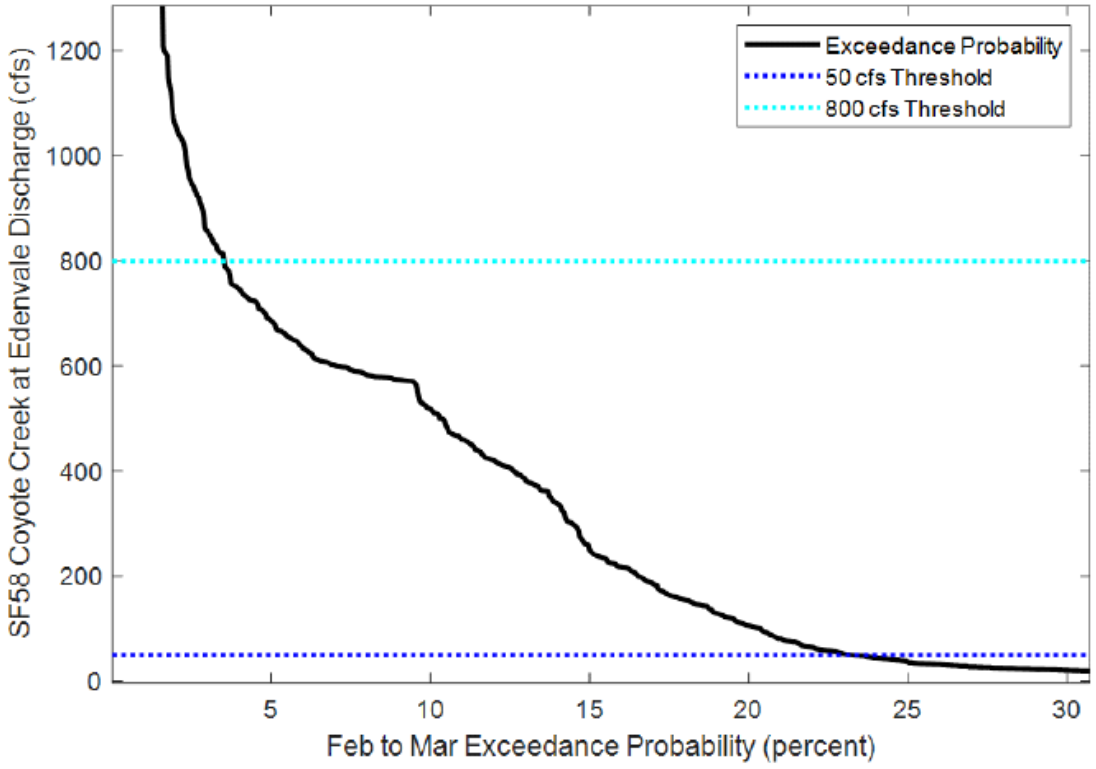
exceedance probability (Figure 8). When pulse flows are released or will be released for spring out-migration, the radial gates allow for downstream fish passage.

Table 2: Passage conditions at Coyote Percolation Dam with flashboard dam (present operations) (Source: Stillwater Sciences 2020a).

Flow (cfs)[1]	Winter up-migration[2]	Spring out-migration[3]	Remarks
Up to 50	Fish Ladder	Fish Ladder	Dam in and Radial gates closed
50 to 800	Fish Ladder/Radial gates	Fish Ladder/Radial gates	Dam in and Radial gates open
Above 800	Likely not passable. Fish unlikely to swim against high velocities in fishway, through radial gates and over dam apron	Over dam apron, through radial gates	Dam would be overtopped at high flows. Dam removal needed. Two weeks lead time necessary, Radial gates would be open

Notes:
[1] Measured at stream gauge 5082
[2] February through March
[3] April through May

Figure 8: Discharge exceedance probability curve, showing the probability of a 50 cfs (~23 percent) and 800 cfs (~4 percent) flood event occurring between February and March in any given year. Data is for February and March from 1979 to 2019 inclusive at USGS gage SF58 Coyote Creek at Edenvale. (Source: Stillwater Sciences 2020a).



Valley Water's November 2, 2020 comments clarified that the existing fishway operates year-round and is not closed during the non-migration period of June 1 through September 15. Further, the October 1 EA incorrectly stated that the fishway may not be suitable for successful upstream passage of native fishes such as cyprinids or sculpins. As documented by the Vaki Riverwatcher installed at the ladder and reported by Valley Water, numerous fish have successfully passed through the fishway, including Ictalurids (catfish), cyprinids (minnows), suckers, and centrarchids (Valley Water 2020c).

Valley Water's proposal includes reopening of the original Coyote Creek channel (northern channel) downstream of the existing dam, which is a section of the original Coyote Creek channel currently separated from Coyote Creek at its upstream end by a dike that was constructed during dam construction. The approximately 1,200 foot-long southern channel was built during construction of the dam, and is not the original stream channel. The two channels converge approximately 2,200 ft below the current outlet works discharge. Controlled releases from the current 42-inch-diameter outlet pipe is released into the southern channel with a maximum flow of approximately 500 cfs. Uncontrolled flow over the spillway flows into the northern channel. Aquatic habitat in Coyote Creek below the dam is described in the October 1 EA, which adequately describes the southern channel. The northern channel does not currently provide lotic habitat but a portion of the channel contains a backwater pool which supports high densities of non-native, predatory fish (in addition to bullfrogs). Numerous largemouth bass and sunfish are frequently observed in the backwater pool (Valley Water 2020a).

3.2.4.2 Environmental Effects

Construction of Low-level Outlet Tunnel and Implementation of Creek Channel & Bank Erosion Measures

The proposed outlet channel and bank erosion measures, including reopening of the historical Coyote Creek channel, have been developed to avoid and minimize adverse hydromodification effects to Coyote Creek immediately downstream of the proposed low-level outlet. Based on a general construction schedule, construction of the ADTP is likely to extend over three winter precipitation seasons, with construction anticipated to be completed in December 2023. Adverse effects to aquatic resources and habitat can result from the construction activities that create localized increases in suspended sediment, equipment hazardous material leaks, and localized dewatering.

Construction will require temporary flow diversion and localized dewatering of Coyote Creek in two areas immediately downstream of Anderson Dam (approximately 60 feet and 400 feet long) (*Supplemental EA Figure 7*). Valley Water will use an excavator to recontour the Anderson Dam Tunnel outlet channel and reopen the northern channel, and will import riprap bedding to the site for placement in the Anderson Dam

tunnel outlet channel to minimize erosion. To protect aquatic resources during construction, Valley Water will submit a dewatering and fish rescue plan for NMFS and California DFW review prior to the localized dewatering activities, will implement several plans and BMPs that will minimize effects on water quality (*Supplemental EA Section 3.2.3.2 Water Quality*), and will implement water quality monitoring in construction areas. The potential effects of construction activities will be limited to temporary, localized increases in turbidity and suspended sediment. Any construction related turbidity plumes are expected to dissipate and return to baseline levels shortly after cessation of activities, and adult and juvenile fish in the Coyote Creek are likely capable of avoiding these disturbances with minimal risk of injury. Valley Water will initiate additional fish rescue and relocation efforts based on the water quality monitoring in the construction area, if necessary.

Excavation of the tunnel will increase suspended sediment concentrations in the reservoir. As the exact timeline for these construction activities is not specified, we are unable to determine what life stages of fish may be exposed to the temporary turbidity plumes. Valley Water proposes to monitor turbidity from water discharges from both the north channel and the weir bypass flows into Coyote Creek, use turbidity curtains to separate the tunnel excavation area from the surrounding reservoir, and implement suitable standard BMPs for working in creek environments to further avoid and minimize potential effects. The water quality information collected by Valley Water in the construction areas will inform the need for any fish rescue and relocation efforts. Any potential adverse effects to adult and juvenile fish in the reservoir will be limited to temporary, localized increases in turbidity and suspended sediment. These construction-related plumes are expected to dissipate and return to baseline levels shortly after cessation of activities, and fish are likely capable of avoiding these disturbances with minimal risk of injury. With monitoring and control of sediment and turbidity from construction related activities and implementation of BMPs, the potential effects to fish will be avoided and minimized during these construction activities.

Coyote Percolation Dam Replacement

Valley Water proposes to replace the Coyote percolation dam with an inflatable rubber dam. The construction activities for the proposed bladder dam installation are described in *Supplemental EA Section 3.2.3.2 Water Quality* and the construction site is illustrated in *Supplemental EA, Figure 3*. Based on a general schedule attached to Valley Water's January 19, 2021 monthly progress report, construction of the replacement dam is expected between approximately May through December 2023. Valley Water's September 25, 2020 letter indicates that construction is planned to be completed in two phases: Phase 1 includes the new bladder dam, its foundation, and retrofits to the weir

panels of the existing fishway to enhance fish passage, which would be constructed by December 2023; Phase 2 includes modification of Coyote Creek downstream of the dam to allow fish to safely pass over the deflated bladder, which would be completed no later than 2027.

The reach downstream of Coyote percolation pond supports riffle and pool habitats (Buchan and Randall 2003), which can be used during the spawning season by native fish that prefer spawning in riffle habitats and over gravel substrates, such as Sacramento hitch, Sacramento blackfish, Sacramento sucker, and Pacific lamprey (Wang 1986, Moyle 2002), however, Buchan and Randall (2003) report that the reach supports large populations of non-native predatory fish, with few native fish. As noted in the *October 1 EA Section 3.3.4.1 Aquatic Resources*, most of the non-native fishes are summer spawners, while many of California's native stream fishes spawn in streams during periods of high flow, typically in February through April (Moyle 2002) but extending as late as June or July.

During replacement of the Coyote percolation dam, construction activities are likely to release fine sediment which can settle in the interstitial spaces of the gravel substrate and temporarily increase turbidity. Based on the anticipated construction schedule and the timing of native fish spawning, construction activities are not expected to affect native spawning adults, but will have short-term, temporary effects on any early life stages or rearing juveniles that in the area. Construction activities in the summer will overlap with nest-building or spawning activities of non-native fish in the pond and in Coyote Creek downstream of the percolation dam. Many of the non-native fish known to occur in the Coyote Creek are tolerant of environmental degradation (*Supplemental EA Table 1*). If construction activity causes non-native adult fish to abandon spawning activities or reduces recruitment of young fish, it not expected to have a significant adverse effect as the non-native fish are regionally common and widespread, or because they may be considered Aquatic Invasive Species (AIS).[36]

The potential severity of these effects at different life stages depends on the concentration of suspended sediment and duration of exposure to suspended sediments (Newcombe and Jensen 1996). Outside of the spawning season, non-spawning adults and juveniles or young-of the year fish in the area of construction are expected to be able to avoid the temporary, localized increases in turbidity and suspended sediment associated with construction activities by seeking refugia or moving to unimpacted reaches. Throughout construction, Valley Water proposes to implement water quality monitoring

[36] AIS are defined by California DFW, and included species are summarized at: https://wildlife.ca.gov/Conservation/Invasives/Species.

in the affected area and conduct fish rescue if necessary, and will employ standard BMPs to minimize stormwater runoff and erosion. These measures are expected to reduce the potential for adverse effects to spawning and rearing fish that may occur in Coyote Creek below the dam and in the percolation pond.

As described in *Supplemental EA Section 3.2.3.2 Water Quality*, construction will require temporary cofferdam installation and dewatering. Valley Water will submit a dewatering and fish rescue plan for NMFS and California DFW review and approval prior to the localized dewatering activities. This will benefit native fish by relocating them from areas of disturbance and allows for opportunistic control of non-native predatory fish in the Coyote Creek percolation pond. With these measures in place, risk of stranding during dewatering is low.

Valley Water commented on November 2, 2020 that the fishway is open year-round, and many native fish are observed passing upstream and downstream through the fishway. For non-anadromous fish that utilize the ladder, the temporary loss of connectivity will not have a significant adverse effect, as those fish are expected to be able to find suitable feeding or rearing habitat in adjacent reaches of Coyote Creek and are not using the ladder to complete critical life history needs. Pacific lamprey and Chinook salmon have been observed in the fishway (Valley Water 2020c) and are known to be present in the CWMZ, but primarily utilize habitat in the downstream reaches of Coyote Creek (Valley Water 2020a). Closure of the fishway during the spawning season will limit access to potential spawning areas in the CWMZ for migrating Pacific lamprey (approximate upstream migration season from March to June (Moyle 2002)) and Chinook salmon (approximate peak migration September through October (Moyle 2002)). Although current information indicates that a small number of lamprey and Chinook would be affected and adequate spawning and rearing habitat will remain accessible in the downstream reaches, limiting the habitat connectivity for these anadromous fish has the potential to temporarily adversely affect spawning success and recruitment.

As described here, the replacement of the Coyote percolation dam will affect fishery resources, although there is uncertainty in the extent and duration of the effects. There is, however, expected to be a beneficial effect from opportunistic removal of AIS and predatory non-native fish during dewatering activities if control of non-native fish is permitted by the resource agencies. Adverse effects from construction activities are expected during the native fish spawning season, in particular for anadromous lamprey and Chinook. However, this adverse effect can be minimized by avoiding construction activities and closure of the fishway during the spawning season. NMFS conservation recommendations regarding the Coyote percolation dam are discussed in *Supplemental EA section 3.2.6.3 Conservation Recommendations*.

Coyote Creek Flood Management Measures

Valley Water will construct three flood protection measures by the end of 2023, located along three reaches of Coyote Creek between Interstate 280 and Oakland Road: installation of floodwalls, construction of a levee, and elevation of ten structures. Localized dewatering may occur to facilitate construction of some of the measures (Stillwater Sciences 2020a). The reaches of Coyote Creek and adjacent uplands where flood management activities will occur are deep within the extensive urban area of San Jose. Fish in the reach have the potential to be affected by loosened and exposed soils and channel material, localized dewatering, anthropogenic noise resulting from pile installation, and by any equipment operated near the channel. To protect aquatic resources during construction, Valley Water will submit a dewatering and fish rescue plan for NMFS and California DFW review prior to the localized dewatering activities, will implement several plans and BMPs that will minimize effects on water quality (*Supplemental EA Section 3.2.3.2 Water Quality*), and will implement water quality monitoring in construction areas. The potential effects of construction activities will be limited to be temporary, localized increases in turbidity and suspended sediment. Any construction related turbidity plumes are expected to dissipate and return to baseline levels shortly after cessation of activities, and adult and juvenile fish in the Coyote Creek are likely capable of avoiding these disturbances with minimal risk of injury. Valley Water will initiate additional fish rescue and relocation efforts based on the water quality monitoring in the construction area, if necessary.

Valley Water will install the off-channel floodwall sheet piles using a silent piling technology. This is a non-dynamic method for the installation of steel sheet piles that presses the sheet piles in place without hammering or vibrations and is considered appropriate for environmentally sensitive construction sites. Therefore, the method is not expected to result in direct injury to fish (McCauley et al. 2003, Popper and Hastings 2009). If there are low-energy sounds generated during construction, any avoidance behavior or potential displacement is expected to be minor and temporary. Fish in this reach have access to refuge in Coyote Creek upstream and downstream of the construction area, as well as tributary habitat in Upper Penitencia Creek and Lower Silver Creek. Therefore, the risk of injury or mortality associated with pile driving is low, and potential displacement effects are expected to be temporary.

Project Operations After Construction of ADTP

Operation of the Anderson Dam tunnel to maintain a drawn down reservoir condition is not expected to adversely affect conditions within the reservoir. The ADTP

outflow of 2,500 cfs is lower than discharges anticipated during storm events, which means that the reservoir is expected to fill during storm events. Reservoir habitat is expected to continue to be suitable for warm-water adapted species, and management of the reservoir level to maintain deadpool is not expected to adversely affect fish in Anderson Reservoir.

To keep the reservoir drawn down using the larger 2,500 cfs capacity ADTP outlet, wet weather water discharges will be higher compared with existing conditions, and Valley Water proposes to distribute the flow immediately below the dam between the north and south channels. By installing fixed weirs at the head of each channel, Valley Water will split the amount of flow that enters each channel under a given reservoir release. Under the current design, the lowest flows will be conveyed through the southern channel up to 100 cfs and would be split unequally between the channels for flows above 100 cfs (*Supplemental EA, Table 3*) (Valley Water 2020a, Stillwater Sciences 2020a). The southern channel would operate with flow rates at or less than historical release rates (approximately 500 cfs), with the remainder of releases passing through the northern channel. This will minimize the potential for erosion of the southern channel, given that no new erosion protection will be provided in the southern channel.

Table 3: Flow distribution between channels in cfs (Source: Valley Water 2020a).

Outlet Works Release	Flow in Southern Channel	Flow in Northern Channel
6	6	0
100	100	0
1,000	170	830
2,000	272	1,728
4,000	385	3,615

Valley Water proposes to line the reopened northern channel with an engineered fill suitable for fish migration, and line the channel banks with a biotechnical lining that will allow the growth of vegetation. The construction of habitat features and installation of the biotechnical lining in Coyote Creek's northern channel will seasonally increase stream habitat available downstream of Anderson Dam, and minimize the loss of stream habitat and removal of riparian vegetation at the south channel since the 1,200 foot south channel would not be hardened. The northern channel is expected to be watered during winter flows and other high flow events and would be accessible to aquatic species to use. Currently there is not enough information about the habitat features or biotechnical lining to understand the potential benefits of habitat restoration in the north channel. Condition 2 of the WQC requires Valley Water to develop a revegetation plan for the

channel banks and riparian zone of the northern channel, as well as a list and description of habitat improvement features that will be implemented. Commission staff expect that Valley Water's ongoing consultation with the resource agencies will result in additional information about the specific habitat restoration activities or goals in the north channel, however, these measures have not yet been determined and therefore cannot be analyzed in the Supplemental EA.

Dewatering of the north channel would occur when flows decrease and then cease flowing into the north channel following high flow events, creating the potential for fish and aquatic macroinvertebrates in the channel to become stranded. In spring months if the channel is used by fish for spawning, smaller juvenile fish would be most vulnerable to potential stranding because of weak swimming ability and preference for near-shore habitat. Adult fish are expected to be able to relocate with receding flow but can become trapped in isolated pools if there are potholes in the channel. Implementation of ramping rates would help ensure the protection of aquatic resources in the channel, as would monitoring activities to determine use of the north channel and risk for stranding. Condition 2 of the WQC requires, in part, Valley Water develop ramping rates and flows that will be implemented during tunnel operation, including flow distribution to the northern and southern channels once operational, and monitoring for fish stranding in the northern and southern channel under implementation of the new flow regime. With implementation of these measures, the potential adverse effect to fish and aquatic resources in the north channel is expected to be minimal. In addition, monitoring surveys in the north channel would improve understanding about fish use of the channel. Development of monitoring for fish stranding in the channel is discussed in *Supplemental EA 3.2.6.3 Threatened and Endangered Species and Essential Fish Habitat*.

Under conditions anticipated following completion of ADTP, high flows will occur downstream at a rate greater than they have in the past (*Supplemental EA Section 3.2.2.2 Water Quantity*). Valley Water proposes to lower the bladder dam at the Coyote percolation pond to allow flows in excess of 800 cfs to pass safely, and conservatively estimates that the bladder dam would need to be deflated at least once a year for flows that exceed 800 cfs (Stillwater Sciences 2020a). Current information does not estimate the duration of time the bladder dam would be lowered to pass these flows. High flows can temporarily limit passage in fishways due to adverse hydraulic conditions in the fishway, development of false attraction flow, and generally impassible conditions (FWS 2019).

When the bladder dam is lowered to pass flows over 800 cfs, upstream migration is likely to be affected if fish are unable to swim against the velocities and if the tailwater flow masks attraction flow to the ladder. Downstream passage when the bladder dam is

deflated will occur over the deflated dam or at the radial gates. Upstream passage when the dam is inflated will occur through the fish ladder, with flows released flows are released through the fishway (flows up to 50 cfs) and radial gates (flows between 50-800 cfs) (*Supplemental EA, Table 2*). With the bladder dam, the facility is expected to operate as it has currently and would not be passable at flows over 800 cfs (*Supplemental EA, Table 2*), though the frequency and/or duration of this impassible condition will be increased. While Pacific lamprey and Chinook salmon tend to utilize habitat in the downstream reaches of Coyote Creek (Valley Water 2020a), both species were identified passing at the fishway in 2019 (Valley Water 2020c) and can utilize habitat in the CWMZ. Time spent searching for upstream passage routes can be energetically costly for anadromous fish and, if prolonged, migratory delay can adversely affect spawning success (Caudill et al 2007, Castro-Santos et al 2016).

Valley Water proposes to operate the bladder dam to benefit aquatic habitat and fisheries resources, stating that lowering the bladder dam could: (1) flush sediments from the reach between Coyote percolation pond to Ogier Ponds by allowing higher flows to flush sediment downstream; (2) displace non-native warmwater adapted fish present in the Coyote percolation pond; and (3) provide flushing pulse flows for migrating fish. As analyzed in the *October 1 EA Sections 3.3.3.2 Water Quality* and *3.3.4.2 Aquatic Resources*, the reservoir drawdown will result in increased sediment deposition and turbidity in Coyote Creek, which is likely to have short-term direct effect to most fish in Coyote Creek; moderate adverse effects to Pacific lamprey ammocoetes and spawning adults; moderate adverse effects to spawning adult Chinook; and moderate long-term effect to aquatic habitat and production. The operational flexibility of the bladder dam will improve the ability to flush sediment from the ponded areas during high flow events and is expected to reduce adverse sedimentation effects to native fish and aquatic habitats. Additionally, Valley Water's ability to drain Coyote percolation pond will displace non-native predatory fish, which will benefit native fish by providing opportunities to utilize the pond habitat with reduced predation and competition from the non-native species. Seasonal pulse flows will also benefit Pacific lamprey and Chinook salmon, as downstream migration of ammocoetes and dispersal of juvenile Chinook salmon occurs during high-outflow events in winter and spring (Moyle 2002).

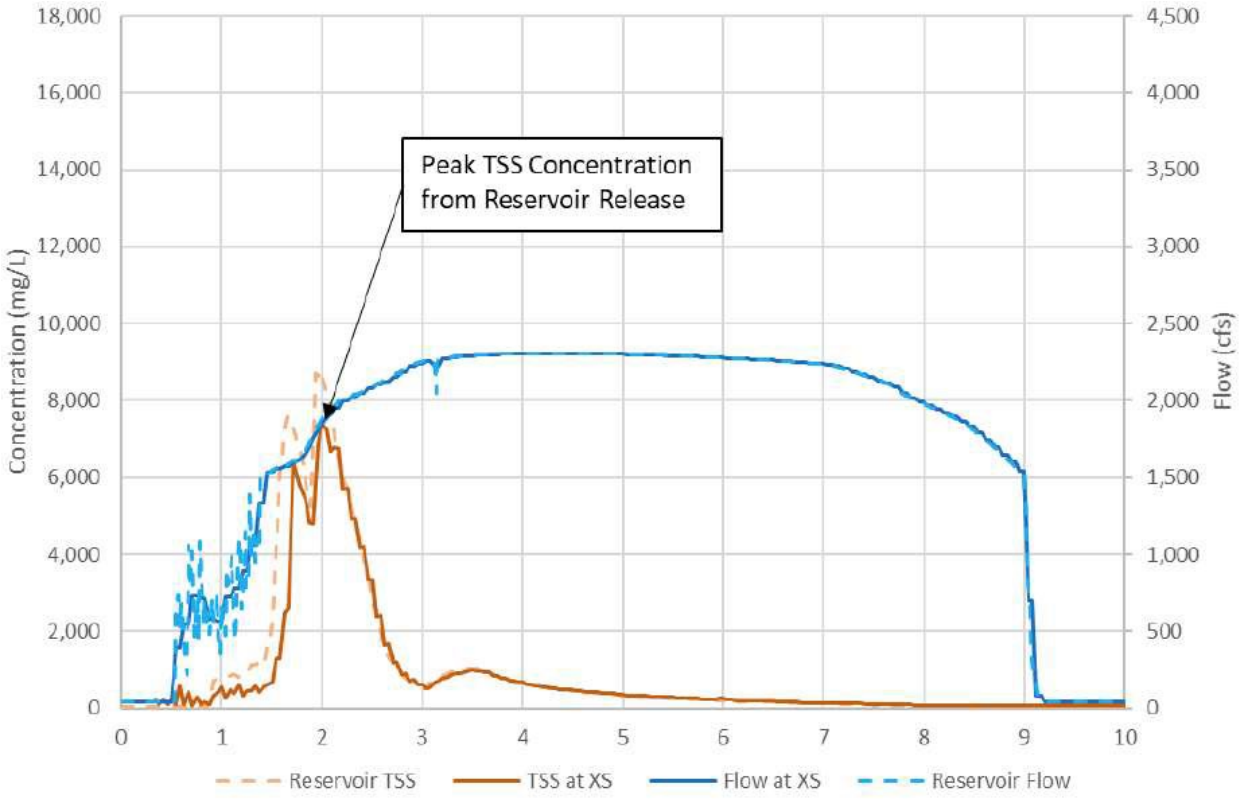
Valley Water is continuing to discuss the details of the fish ladder and inflatable dam operations in ongoing consultation with resource agencies and stakeholders and has committed to further evaluations of these components or other feasible alternatives throughout the ADSRP consultation process. Further, Valley Water is continuing to evaluate the fish ladder and radial gates, including assessment of: the as-built and background material; the existing fish ladder under three flow conditions (historic flows, FOCP and ADTP construction flows, and Post-ADTP flows); the existing grouted rock

approach to fish ladder; options to improve both ladder and approach; and plans for potential recommended improvements (Stillwater Sciences 2020a). Currently, there is not enough information about the operation of the fishway under expected flow conditions, including how attraction to the ladder will be affected by dam operations and how the timing of dam operations will overlap with fish migrations, to make a determination of about the extent and duration of the effects to aquatic resources. Additionally, the timing, frequency, magnitude, and duration of the beneficial releases (to displace non-natives, flush sediment, or provide pulse flows) is not currently available and therefore cannot be analyzed in the Supplemental EA. Although an overall beneficial effect is expected from the proposed modifications to fish passage and increased flexibility of the inflatable dam operations, Commission staff anticipate that Valley Water's ongoing consultation with the resource agencies will result in additional information about the operation of the bladder dam (which is not a project feature of the project) to ensure alignment with fishery management objectives for Coyote Creek. In the absence of this information, development of a comprehensive Fish Passage Design Plan to finalize the hydraulic design and operational considerations of the facility would ensure effective passage and beneficial releases; however, the Coyote percolation dam does not serve a project purpose (see *Supplemental EA Section 2.2.3 Valley Water's Coyote Creek Percolation Dam and Coyote Creek Flood Protection Project*). Commission staff note that Valley Water must acquire all necessary federal, state, and local permits and land rights associated with construction and operation of the bladder dam.

As described in this *Supplemental EA Section 3.3.3.2 Water Quality*, sediment in the reservoir will be mobilized during large storm events and transported through the tunnel outlet. During operation of ADTP, high flow events will result in an increase in TSS in Coyote Creek above existing conditions. This will cause short-term adverse effects to water quality and aquatic habitat in Coyote Creek downstream of the dam, while the reservoir is lowered back to 488 ft. Sediment modeling with the new tunnel outlet and existing outlet operating predicts 2 successive short-duration peaks of suspended sediment concentrations during back-to-back two-year annual recurrence interval events ("worst case" scenario) (*Supplemental EA Figure 9*). The initial increase in TSS (approximately 5,000 milligrams per liter (mg/l) from the existing outlet and 7,500 from the Anderson Dam tunnel) occurs when the front end of the storm reaches the outlet and the water level in the reservoir is low; as the water level in the reservoir rises, the TSS concentration decreases. When the second peak occurs (approximately 6,800 mg/l from the existing outlet and 9,500 from the Anderson Dam tunnel) shortly after, the reservoir elevation has increased but most of the erodible reservoir sediments will be inundated (*Supplemental EA Figure 9*). The concentration of TSS downstream of the reservoir will exceed 5,000 mg/l for approximately 2 days, then will drop below 200 mg/l

after 3.5 days as sediment is diluted of settles out (URS 2020b; Stillwater Sciences 2020c). The effects of the of two-year annual recurrence interval events are considered to be representative of larger flood events as well due to the 2,500 cfs capacity reservoir outflow; larger storms generating higher flows will fill the reservoir and are not expected to significantly increase suspended sediment concentrations compared with the two-year event.

Figure 9: Predicted suspended sediment downstream of Anderson Dam for existing outlet and Anderson Dam Tunnel outlet with two-year inflow (Source: Stillwater Sciences 2020c).



The effects of the increased sediment on aquatic resources in Coyote Creek depends on the magnitude and duration of suspended sediment exposure and the life stage at the time of exposure (Kemp et al 2011, Kjelland et al 2015). Due to the duration of peak TSS, the expected time for sediments to flush or settle out along with the temporary nature of the disturbance associated with storm events and active avoidance behaviors, larger juvenile and adult fish in Coyote Creek are likely to avoid the potential adverse effects by seeking refugia or moving to unimpacted reaches. The direct effects to individual behavior of these fish during the "worst case" scenario are expected to be temporary and are expected to subside as sediment settles out or is flushed downstream. However, sedimentation can have moderate long-term adverse effects to the early life

stages and smaller juveniles which have limited mobility to avoid the effects of suspended sediment, which can result in reduced survival of rearing juveniles, reduced juvenile production, and reduced spawning success of adults.

As discussed in the *October 1 EA Section 3.3.4.2 Aquatic Resources*, sediment deposition resulting from the FOCP will have a moderate adverse effect on Pacific lamprey ammocoetes. This conclusion considered the ammocoetes' prolonged freshwater residency in sediments and the potential for sediment from the Anderson Reservoir to be contaminated with mercury (see *October 1 EA Section 3.3.3.2 Water Quality*), which presents the potential for bioaccumulation of toxins (Hass and Ichikawa 2007, Bettaso and Goodman 2010, Nilsen et al 2015). Valley Water provided information that indicates that most life stages of lamprey have a higher tolerance to poor water quality (siltation, turbidity, temperature, or lowered dissolved oxygen) than salmonids (Zaroban et al. 1999) and that the deposition of fine sediment downstream can be beneficial for ammocoetes by increasing larval habitat capacity (Close et al. 2010). While we concur that additional sediment deposits will provide substrate for ammocoetes, our determination of moderate adverse effects to ammocoetes considers the quality of the sediment deposits. Since issuance of the October 1 EA, the Water Board has issued a WQC for the project. Condition 8 of the WQC requires Valley to develop a plan in consultation with the resource agencies that will include, in part, evaluation and discussion of the potential for mobilization or methylation of mercury associated with project implementation, as well as measures to reduce the amount of methylmercury or mercury methylation in the watershed as affected by the project. Though we expect an adverse effect due to the potential for contaminated sediment, the implementation of the Mercury, Diazinon, and PCBs Plan is expected to allow Valley Water to determine the risk or contaminates in the sediment to mobilize and enact appropriate remediation measures to protect the environment, which will reduce the long-term adverse effects. Additionally, throughout the FOCP, Valley Water will monitor water quality and conduct fisheries sampling in the CWMZ and other select sites, which will inform the need for future fish rescue efforts. Valley Water also proposes to implement the Sediment Discharge Monitoring Plan and will monitor affects to spawning gravel habitat in the CWMZ during the FOCP, which is expected to identify the effects of sedimentation on habitat in Coyote Creek throughout FOCP, and can be used to inform mitigation or restoration actions.

During the ADTP operation due to the restricted reservoir elevation, there is potential for continued drying of Coyote Creek during the dry summer and fall seasons compared to existing conditions because reservoir storage will be diminished (Stillwater Sciences 2020a). As analyzed in the October 1 EA, imported water releases and normal operation of Coyote Reservoir will maintain flow throughout Coyote Creek during

operation of the ADTP, contingent upon water availability. Direct or indirect effects to fish and aquatic habitats in Coyote Creek from operations of the ADTP will be similar to those described in the October 1 EA for dewatering. Additionally, the flow variations associated with ADTP operation is expected to improve natural sediment sorting processes in Coyote Creek and maintenance of aerated gravels, which will provide benefits for invertebrates and spawning and rearing fish by improving habitat and substrate quality. As discussed in *Supplemental EA Section 3.2.2.3 Water Quantity*, the Coyote Creek flood management measures are expected to prevent flooding in certain areas and restrict water to the creek channel only in particular locations, which will increase the volume and velocity of water in the creek. The reach will remain highly channelized through the urban environment and will continue to serve as a migration corridor for fish.

The October 1 EA concluded that Chinook and lamprey residing in the downstream reaches of Coyote Creek would be moderately adversely affected by elevated temperatures in Coyote Creek, stating that the current warm summer temperatures in the reach (*October 1 EA, Table 3*) would be exacerbated by imported warm water released through the CVP extension downstream of Ogier Ponds. Commission staff also concluded that these warmer temperatures could facilitate shifts in the fish community, favoring non-native warm-water species. The analysis used information indicating that Chinook and lamprey are typically in the lower reaches of Coyote Creek, with Chinook spawning mostly in the lower reaches of Coyote Creek and Upper Penitencia Creek and a few individuals as far upstream as Metcalf Dam, and lamprey in the lower reaches of Coyote Creek from approximately Highway 237 to Interstate 280 (Valley Water 2020a). In its comments filed November 3, 2020, Valley Water provided information that lamprey and Chinook are found in the CWMZ, where chillers will be used to maintain cool water habitat. Additionally, Valley Water commented that the CVP extension would not cause warming beyond current temperatures below Ogier Ponds, and that the imported water temperatures are no warmer than existing temperatures downstream of Ogier Ponds. Therefore, Valley Water does not agree that there will be adverse effects to native fish as there would be no change from the current condition.

Valley Water's comments filed November 3, 2020 indicates that Chinook and lamprey will have access to cold water habitat in the CWMZ. We agree that water temperatures in the CWMZ will not be limiting to migrating adult or juvenile Chinook or adult lamprey during the summer months since they are not expected to be in the system, based on expected migration seasons. Our determination for native species considered how the loss of the Anderson Reservoir's cold pool and the release of imported water could lengthen the period of unsuitable temperatures in Coyote Creek, which has the

potential to affect migration or spawning activities occurring outside of peak periods and rearing of ammocoetes. Likewise, the persistence of warm water through and downstream of Ogier Ponds and Metcalf Pond (Smith 2018) also has the potential to be exacerbated by the continuous release of warm imported water downstream of Ogier Ponds by minimizing diel fluctuation in the Coyote Creek. Valley Water's temperature model indicates relatively stable, but warm, temperatures from the imported water release (Valley Water 2020a), while under current operations there are some diurnal fluctuations in Coyote Creek (Smith 2018). The current temperature model does not examine the proposed continuous release of imported water at the CVP extension, so there is no information about potential effects to the current diurnal temperature variation in the downstream reaches and consequently, no information about the potential effects to native fish in the reach. Although fish can acclimate to higher temperatures and many native fish in Coyote Creek are tolerant of warm water, prolonged exposure to suboptimal temperature can cause physiological stress (Beitinger et al 2000). Diel temperature fluctuations may provide some protection from mortality (Sullivan et al 2000).

There is currently not enough information about how temperatures in the downstream reaches will be affected by the continuous release of imported water at the CVP extension. Commission staff, therefore, revises its determination of adverse effects as there is not sufficient information about the effect the CVP extension releases on water temperature downstream of Ogier Ponds. However, Commission staff expect that temperature monitoring of the CVP extension and chillers, required under the Commission's October 1 Order and proposed as condition 3 of the WQC, in addition to the current temperature monitoring temperature monitoring at the 10 permanent monitoring locations on Coyote Creek, will allow assessment of the aquatic habitat conditions in Coyote Creek, identify trends, and provide information for future actions if an adverse effect is identified.

3.2.5 Wildlife and Terrestrial Resources

The October 1 EA analyzed the environmental effects of the proposed actions associated with the reservoir drawdown on wildlife and terrestrial resources. Commission staff concluded that the prolonged reservoir drawdown will not create adverse conditions for most species as a sizable water source will still remain at deadpool conditions. Valley Water's plan to augment releases from Anderson Dam with imported water through the extension to the CVP will assist groundwater recharge and mitigate affects to downstream riparian habitat and wetlands. Reservoir rim stability improvements will result in disturbance to grassland habitat and coast live oak forest and woodland. Effects on grassland habitat will be largely temporary, however, the loss of some coast live oak forest and woodland habitat will be permanent. Valley Water proposes to implement BMPs including revegetation activities and will comply with

conditions of the SCVHP to minimize adverse effects. The action area currently contains several invasive species and pathogens that degrade habitat quality for native plants and animals, however, Valley Water proposes a number of BMPs to address concerns for further spread. Together with recommended measures discussed in the October 1 EA, and measures under the SCVHP, invasive species concerns will be minimized.

Commission staff recommended in the October 1 EA that Valley Water continue to implement conditions of the SCVHP to benefit a number of plant and wildlife species. Commission staff recommended that Valley Water develop a Phytophthora Pathogen Management Plan, a Wetland and Riparian Habitat Dryback Monitoring Plan, an Amphibian Disease Monitoring Plan, Invasive Species Plan, and a plan to monitor for affects to western pond turtles. Commission staff also recommended restoration surveys for and plantings of native plants, including native milkweed larval host plants and nectar plants for the monarch butterfly.

3.2.5.1 Affected Environment

The *October 1 EA Section 3.3.5.1 Affected Environment* provided a summary of the existing land cover types and habitat for the whole FOCP footprint including the Anderson Dam reservoir and areas downstream. Land cover types include aquatic (reservoir, perennial streams, and intermittent streams); California annual grassland; coast live oak woodland and forest; urban-suburban (i.e., developed); northern coastal scrub/Diablan coastal scrub; mixed riparian woodland and forest; and foothill pine-oak woodland. Commission staff also provided examples of plants and wildlife found within each land cover classification.

Tunnel construction is proposed to occur in proximity to a barn supporting pallid bats. Since 1998, a bat biologist has been periodically monitoring a maternity colony of pallid bats located in a barn near the base of Anderson Dam. This barn has supported up to 80-85 females, which use the roost year-round (including as a maternity roost in spring and summer). Given the presence of these females, an equivalent number of males are likely present in the vicinity, producing a population estimate of up to 160-170 individuals associated with this roost since monitoring began. The most recent survey of this barn, in September 2019, produced a count of 64 individuals exiting the barn (Valley Water 2019d). Since 1998, seven other pallid bat colonies in Santa Clara County have declined substantially; for example, in 2012, those other colonies collectively supported approximately 35 females, and in 2016, only one of those other colonies was active (supporting only three females). More recently, a colony of 10 to 15 individuals has been detected at the University of California's Blue Oak Ranch Reserve (Valley Water 2020a citing D. Johnston, personal observation), but the colony in the barn near Cochrane Road likely represents the largest and most stable colony of the species known in Santa Clara County, and supports at least half of the known individuals in the county. Although the barn in which this roost occurs is located immediately outside the FOCP site, males

associated with this roost are expected to roost in suitable hollows or crevices within mature trees on the proposed FOCP site.

3.2.5.2 Environmental Effects

Potential adverse effects on wildlife and terrestrial resources in the proposed FOCP area will occur primarily during mobilization and construction activities. Potential adverse effects may include direct and indirect effects on: in-stream and upland habitats; associated plant communities; individuals of plant and wildlife species, and the habitats of and resources required by those species; and the potential degradation of water quality caused by releases of sediment or placement of fill or other construction materials (which may affect aquatic habitats and species, including invertebrates that provide food for animals). Potential effects to threatened and endangered species are further analyzed in *Supplemental EA Section 3.2.6 Threatened and Endangered Species and Essential Fish Habitat.*

Tunnel Construction, Creek Channel and Bank Erosion Control, and Reopening of Coyote Creek Channel

Construction of the Anderson Dam tunnel will result in the loss of approximately 7.3 acres of California annual grassland, 5.8 acres of coast live oak forest and woodland, 4.1 acres of northern coastal scrub/Diablan coastal scrub, 3.8 acres of mixed riparian woodland and forest, and 0.8 acre of foothill pine-oak woodland, as well as disturbance of reservoir and urban-suburban land uses. These habitats provide foraging and roosting habitat for birds and foraging, roosting, and breeding/denning habitat for a wide variety of animals. Construction of the Anderson Dam tunnel would reduce available habitat for these species and could result in injury or mortality of animals that are not able to flee construction equipment and personnel.

Construction of the Anderson Dam tunnel will also directly affect riparian habitat from the construction of the tunnel under the existing dam face, particularly the extension riparian corridor along the Coyote Creek backwater and the old northern channel of Coyote Creek at the FOCP outlet. Project activities that will affect riparian habitats include excavation, tree removal, trampling of riparian vegetation, fill, soil compaction from access and equipment, trimming for access, and alteration of microhabitat conditions around riparian trees and shrubs. While some effects within the riparian zone would be temporary, the loss of any woody riparian vegetation will be considered a permanent effect due to the lag between when effects occur and when mature riparian woodland will again be present.

Proposed FOCP activities related to the construction of the Anderson Dam tunnel may affect oak woodland communities through direct disturbance of vegetation and disturbance, modification, or destruction of habitat. Coast live oak forest and woodland are considered a sensitive upland (i.e., non-wetland, non-riparian) plant community. Within the FOCP footprint coast live oak forest and woodland is mapped at the base of the west side of the dam, along Coyote Creek downstream of the dam, and surrounding

the landslides in the reservoir rim landslide remediation area. Oak woodland habitats support high numbers of wildlife species and thus are very important ecologically.

FOCP activities related to the construction of the Anderson Dam tunnel may cause effects as a result of vegetation removal, replacement of oak woodland with structures, grading, soil compaction, or soil stockpiling. These activities may result in the death of trees, either directly through removal or indirectly through damage to underground root structures. Severe trimming may also damage trees. The largest area of oak woodland within the FOCP footprint to be impacted by construction of the Anderson Dam tunnel is the coast live oak forest and woodland at the base of the dam in the vicinity of Toyon Group Picnic Park Area. A majority of these trees within this area will be removed. As a result, the FOCP will have an adverse effect on coast live oak forest and woodland in the immediate area. However, the loss of approximately 5.8 acres of coast live oak forest and woodland in this area is small in comparison to the 31,652 acres of coast live oak forest and woodland in the study area of the SCVHP (SCVHP 2012). Valley Water proposes to implement BMPs and comply with conditions of the SCVHP to minimize adverse effects.

Because many invasive plants are able to easily colonize recently disturbed areas and/or tolerate repeated disturbance better than many natives, FOCP construction activities related to the Anderson Dam tunnel construction, such as clearing and grading, could create conditions suitable for the spread of invasive plant species if not monitored and controlled. Phytophthora could be spread from contaminated off-site locations onto uncontaminated on-site areas, and from on-site contaminated areas to uncontaminated areas on-site and off-site. Phytophthora infestations can spread to novel areas through the movement of contaminated plant material, roots, or soil, through activities such as clearing and disposal of vegetation, and relocation of soil between the dam and stockpile areas. In addition, boots, tools, vehicles, and equipment that have moved through contaminated areas can then deposit Phytophthora spores or infected debris in uncontaminated areas. The use of water from contaminated watercourses for dust control or other applications can also move spores or infected debris into uncontaminated areas. Spread of contamination could then result in long-term impairment of the health of native vegetation, potentially resulting in declines in abundance of special-status plants, loss or degradation of sensitive native plant communities, and widespread plant mortality in affected areas. Given the proximity of the construction footprint to extensive, high-quality serpentine plant communities on Coyote Ridge, the spread of Phytophthora could have drastic consequences for sensitive species and communities immediately adjacent to the site if measures are not implemented to limit potential spread.

Project construction activities will result in the placement of fill, hydrological interruption, alteration of bed and bank, degradation of water quality, and other direct adverse effects on wetlands and other waters. The majority of these effects will be temporary, resulting from temporary access needed for construction of the project,

staging for activities and improvements to be constructed within jurisdictional waters, trampling of wetland vegetation, vegetation removal, and soil compaction from access and equipment. Temporary adverse effects to jurisdictional waters of the U.S. and state will occur from ground-disturbing activities related to construction of the tunnel in areas that are below the ordinary high water mark of the reservoir, as well as establishing temporary access roads within the reservoir.

In addition, the Coyote Creek channel will be modified to accommodate both initial reservoir drawdown to deadpool and wet season bypass flows proposed to occur through the Anderson Dam tunnel during construction of the ADSRP. Channel modifications will provide erosion protection for increased flow capacities, designed to withstand high velocities associated with these flow releases. Modifications involve re-opening a historical reach of Coyote Creek (the northern channel) that was decommissioned during construction of the original dam. The alignment of the re-opened northern channel will be in approximately the same location as the channel footprint was prior to dam construction in 1950. The northern and southern channel banks will be protected against erosion from releases of water moving up to 7 feet per second. Channels will be modified using biotechnical stabilization that allow for revegetation. The distribution of flow between the two channels will be achieved by construction of a 72-foot wide sharp-crested weir at the head of the northern channel, and a 5-foot wide u-shaped channel invert weir at the head of the southern channel. The modifications of the existing channels and the weir installation will result in placement of fill in jurisdictional waters of the U.S. and state.

Construction within the creek channel will require that flow in Coyote Creek be temporarily diverted around the work area. At the start of construction, a dike will be installed to separate the existing Coyote Creek flows from the backwater area within Coyote Creek, located between Toyon Park and the Live Oak Group Picnic area. The backwater area will then be dewatered to allow for construction within the creek. Groundwater seepage into the dewatered pond would be pumped to the on-site water treatment system, treated, and released back into Coyote Creek. The dike will be removed after completion of the modifications.

In the region, the vegetation communities along streams and rivers often function as environmental corridors; in the FOCP area, Coyote Creek functions as a wildlife movement corridor. In addition, other natural habitats (e.g., oak woodlands and scrub) and the shorelines of Anderson Reservoir function as pathways for terrestrial wildlife movement that allow animals to move along these areas through the developed portions of the FOCP area.

Removing vegetation used as cover by dispersing animals, creating open areas or patches with unsuitable vegetation types, and grading and excavating activities associated with the Anderson Dam tunnel could restrict some wildlife species from moving between

suitable habitat patches during construction. In addition, noise and disturbance associated with construction activities could cause species that commonly use habitats in the FOCP area for dispersal to avoid dispersal through the FOCP area, at least temporarily. Because FOCP construction may occur at night, when many mammals, reptiles, and amphibians are active, use of the FOCP area by dispersing nocturnal animals will be diminished during construction due to disturbance, resulting in a temporary reduction in habitat connectivity through the site. Once construction activities are complete, however, conditions for wildlife movement through and within the FOCP area will be the same as pre-FOCP conditions, and no long-term adverse effects on wildlife dispersal through the FOCP area are expected. Further, sufficient habitat and cover for dispersing animals will remain on the downstream side of the dam, along with sufficient cover within riprap on the upstream side of the dam, following FOCP completion so that animals will still be able to disperse across the dam.

Numerous animals breed within and around the FOCP area, but with the exception of the pallid bat maternity roost discussed below, no particularly important wildlife nursery areas are present in the FOCP vicinity or will be impacted by the FOCP. Also, construction activities will result in the loss of habitat for some wildlife species. Valley Water provided an accounting of approximate losses of certain habitat types for species covered under the SCVHP in its May 29, 2020 filing (Horizon Water and Environment 2020).[37] However, given the relatively limited footprint of the construction areas and the temporary nature of work activities, no substantial adverse effect on species covered by the SCVHP is expected to occur as a result of such disturbance.

FOCP construction activities such as clearing of vegetation and removal of trees will result in the loss of potential nesting and foraging habitat for birds such as yellow warblers and white-tailed kites due to the permanent loss and temporary disturbance of approximately 21.8 acres of upland and riparian habitats. If vegetation is cleared during the nesting season (approximately March 1 through August 31), adult birds will not be killed or injured, as they could easily fly from the work site; however, eggs or young in nests could be destroyed by construction activities during this period. Anderson Dam tunnel construction activities during the nesting season that cause a substantial increase in noise, movement of equipment, or human presence near active nests could result in the abandonment of active nests with eggs or nestlings.

[37] Anderson Dam tunnel construction will result in the loss of approximately 11.1 acres of habitat used by dusky-footed woodrats, approximately 10.7 acres of potential roosting habitat within forested/woodland habitats for western red bat, and loss of approximately 21.8 acres of such dispersal habitat for American badger and mountain lions.

Bald and Golden Eagles

The locations of eagle nests may vary from year to year, and it is unknown where bald and golden eagles may be nesting in 2021 and subsequent years of FOCP construction activity. However, no nests are currently known, or have been identified in the past, in close proximity to the FOCP footprint. The two bald eagle nests that are known to be active in 2020 are located 0.9 and 1.8 miles from the nearest FOCP construction activities and are separated from construction activities by Coyote Ridge. Although golden eagle nest sites have not yet been detected during the 2020 breeding season, the majority of golden eagle activity within the three golden eagle territories in the general area occurs well east and north of the FOCP footprint. The closest is approximately 1.6 miles east of the FOCP footprint, and the others are all more than 2 miles away. Further, much of the golden eagle activity east of the reservoir is separated from the FOCP construction area by ridges that would block eagle nest sites from the view of construction activities and that would buffer nest locations from sound (e.g., produced by blasting that may be required for construction of the tunnel). Although golden or bald eagle nest locations may change in 2021 and later, there is no evidence that these species are likely to nest closer to the construction area than they currently do. As a result, Commission staff do not expect bald or golden eagle nests, or nesting pairs, to be disturbed by FOCP construction activities.

Pallid bats

Construction of the Anderson Dam tunnel will not include direct effects on a known pallid bat roosting location within a barn near the FOCP. Indirect effects from construction is expected though. Construction staging activities will maintain a buffer of at least 120 ft from the barn, but the closest FOCP activities will be along Cochrane Road 75 ft away through heavy use of the road during Anderson Dam tunnel construction. Given the intensity of construction activities, which could occur during both day and night, and the extent to which foraging habitat on Anderson Dam will be disturbed during construction, it is possible that pallid bats may abandon the roost within the barn while construction is ongoing. The noise associated with construction equipment and generators, and lighting from nighttime activities, may disturb bats as they roost in the barn or forage outside the barn, potentially causing them to avoid foraging or roosting (or to abandon roosts) in areas close to construction activity. Typical buffers recommended between intense construction activity and pallid bat roosts are 90 ft for motor vehicles and foot traffic; 120 ft for heavy equipment; 150 ft for trenching; 250 ft for idling equipment or generators; 250 ft for shielded lighting; and 400 ft for unshielded lighting (H. T. Harvey & Associates 2016, Johnston et al. 2017). While it is possible that some females may tolerate construction vehicles using the road only 75 ft away, others may abandon the roost, as braking by the construction vehicles produces high-frequency sounds that may disturb these bats. Therefore, construction activity associated with access along Cochrane Road, coupled with nighttime work on the dam and the

modification of habitat that will occur during construction, could potentially cause at least some female pallid bats to abandon the roost.

Construction during the maternity season (April 1 to July 31) near maternity roosts may cause mothers to attempt to relocate to new roosts. Some females may find alternative roosts in other buildings, hollows in trees, or crevices in rock outcrops nearby. If females leave the barn roost early in the maternity season (e.g., in April or May), their young may be small enough that the females can carry the young to a new roost. However, if females leave the roost later in the maternity season (e.g., June or July), the young may be too large to carry, and abandonment of young or unsuccessful attempts to relocate young could lead to their mortality.

If pallid bats abandon the barn roost during construction, they may return to the barn once FOCP construction has been completed. However, unless high-quality alternative roost sites are present in the vicinity, the population may decline before the bats can re-occupy the barn due to permanent dispersal of females away from the roost, lower reproductive success by females using inferior roost sites (such as roosts located farther from high-quality foraging habitat), or predation of bats that are unable to find suitable roost sites.

Removal of trees containing large cavities and crevices, and modification of rock outcrops with large crevices will reduce availability of roosting sites for males, which are not expected to roost among the females within the barn. Removal of trees and modification of rock outcrops suitable for use by roosting bats will also remove alternative maternity roost sites, if pallid bats abandon the barn as a result of disturbance by the proposed FOCP construction activities. When trees containing roosting colonies or individual bats are removed or modified, individual bats could also be physically injured, killed, or subjected to physiological stress resulting from being disturbed during torpor. Bats roosting in trees that are to be removed or otherwise disturbed may flush from these areas before they can be injured or killed. However, bats flushed during the daytime could suffer increased predation, resulting in the loss of small numbers of individuals.

Anderson Dam tunnel construction will also result in the temporary loss of foraging habitat, such as open grassland areas in which the bats forage, as well as a short-term effect on foraging individuals through the alteration of foraging patterns (e.g., avoidance of work areas because of increased noise and activity levels during FOCP activities). However, because the FOCP will not result in permanent substantial changes to the availability of foraging habitat after construction is completed, the FOCP will not have a substantial long-term adverse effect on foraging habitat or prey availability.

Low-level outlet tunnel construction will have an adverse effect on pallid bats. Valley Water must implement the BMPs it identified in its environmental screening

document filed with the Commission on May 29, 2020 to minimize adverse effects. The abandonment of the pallid bat maternity roost in the barn near Cochrane Road, a decline in the number of bats using that roost as a result of the FOCP, or the loss of multiple pallid bat individuals within an occupied roost (at any time of year) will be an unavoidable adverse effect because this species' populations and available habitat are limited locally and regionally. Because the roost within the barn near the FOCP area is the largest and most stable known roost in Santa Clara County, the loss of, or decline in the number of individuals using a roost in this barn or elsewhere in the vicinity will result in a decline in this species' regional populations.

Valley Water proposes to implement certain measures to avoid and minimize adverse effects on individual pallid bats, the maternity roost site present in the Cochrane Road barn, and the population occupying this roost (measures BIO-1a through BIO-1d). Commission staff recommends these measures be implemented.

BIO-1a: Avoid Disturbance of the Barn Roost. A survey will be conducted by a qualified bat biologist within two weeks prior to the start of construction activities. If bats are present in the barn, the barn will be determined to be occupied. To the extent feasible, Valley Water will implement the following measures, regardless of the time of year in which construction activities occur:

- FOCP-related activities, including staging of equipment and laydown of materials, shall maintain a minimum buffer from the barn of 120 ft for operation of heavy equipment; 150 ft for trenching; 250 ft for idling equipment or generators; 250 ft for shielded lighting; and 400 ft for unshielded lighting.

- Lighting shall be directed away from the barn and shielded to minimize any increase in lighting around the barn.

Buffers could be reduced if a qualified bat biologist, in consultation with the California DFW, determines that the risk to the colony of evicting the bats (per BIO-1b), so that they are not present in the barn during the maternity season, exceeds the risk of allowing FOCP activities to occur within buffers less than those described above. These measures will also be implemented, to the extent feasible, during the remainder of the year (August 1 to March 31) to avoid causing disturbance to the point that bats abandon the barn roost.

BIO-1b: Evict Pallid Bats prior to Initiating Maternity-Season

BIO-1c: Minimize Effects on Pallid Bats Roosting Outside the Barn.

BIO-1d: Provide Alternative Pallid Bat Maternity Roost Structures.

Implementation of BIO-1a to the extent feasible would avoid indirect effects on the pallid bats using the barn roost. If adequate buffers are provided around the roost,

then the pallid bat colony may persist on the site during and following construction. Implementation of BIO-1c would further reduce the possibility that pallid bats may abandon the site and would provide further protection to this bat population by minimizing the potential for males and nonbreeding females outside the barn to be injured or killed during FOCP activities. Valley Water adherence to BIO-1a and BIO-1c would minimize the probability of colony abandonment or a substantial reduction in the size of the colony, and if the FOCP can comply fully with BIO-1a and BIO-1c, effects on this colony will be reduced.

If FOCP activities during the maternity season cannot observe the buffers described in BIO-1a, and especially if such activities must occur so close to the barn that bats must be evicted, then the risk of colony abandonment (or a reduction in the number of females present in the colony) would be greater. Implementation of BIO-1a, in conjunction with BIO-1b, would avoid the abandonment of an active maternity colony during the maternity season. The evicted bats may then find alternative roost sites; however, given the size and stability of the roost at the barn, it is unlikely that these bats would find commensurate habitat elsewhere, and the population of pallid bats in Santa Clara County may be reduced substantially. Implementation of BIO-1d would compensate for FOCP effects if the number of females using available roosts after FOCP construction (i.e., the alternative roost structures and the barn, if it is not demolished) can be documented to be at least 75 percent of existing numbers (e.g., at least 48 females). However, if the FOCP causes the number of females at this site (including the existing barn plus any new roosts provided) to drop below 75 percent of existing numbers after FOCP construction, then a substantial proportion of the regional population will have been affected. In such a case, an adverse effect would remain.

Coyote Percolation Dam Replacement and Flood Control Measures

The Coyote percolation dam replacement will involve in-water work to retrofit the dam and replace flashboards with a bladder dam. The staging area associated with this construction site is in close proximity to the dam (Figure 3). Regarding terrestrial resources, the primary environmental effects of this action will be associated with construction activities including noise and light disturbance and disruption to lands needed for construction activities, but these disruptions will be minor and temporary. Valley Water's proposed BMPs including erosion control measures will reduce these effects.

Valley Water's proposal to construct levees, retaining walls, and acquire or raise properties downstream of Anderson Dam will occur in urban-suburban environments. Construction activities including noise and light disturbance as well as the direct impact to lands associated with this work will also be minor and temporary to terrestrial resources in these developed areas.

Tunnel Operation

Following construction of the Anderson Dam tunnel, it will be operated to maintain a drawn down reservoir until ADSRP is completed, unless otherwise determined. This operation would not affect conditions within the reservoir, relative to the drawn-down deadpool condition. Flows along Coyote Creek downstream from Anderson Dam may be higher than baseline flows after storm events and lower during the dry season. Although water levels in the Ogier Ponds fluctuate to some extent based on flows in Coyote Creek, and therefore dry-season water levels in some ponds may be reduced if dry-season flows from Anderson Dam are lower than baseline conditions, ample water will remain in the Ogier Ponds to support fish and wildlife. These changes are not expected to have substantial adverse effects to wildlife or on foraging habitat.

High flows during storm events will ramp up naturally and will more closely resemble the natural hydrograph than the existing system, providing wildlife the opportunity to move away from any areas where flows are high. Very high flows will potentially cause erosion and scour that will result in the loss of riparian vegetation along the channel; this will result in the loss of some vegetative cover and increase woody debris in the channel. During the dry season, if flows are lower than they are under baseline conditions, aquatic habitat for some species, such as western pond turtles, will be reduced. However, the maintenance of some baseline flow in the creek will maintain suitable aquatic habitat, at least in pools, and wildlife will be able to disperse to off-channel waterbodies such as the Ogier Ponds, the Coyote Ranch pond, and the Parkway Lakes if necessary. Therefore, operation of the Anderson Dam tunnel will not result in substantial adverse effects on wildlife species.

Areas of scour could occur with high flows during storm events which could allow invasive non-native plant species to colonize and establish. However, the degree of scour from these events is not expected to be extensive, and there is a low likelihood that these scouring events would be frequent enough to create a level of disturbance and area of available colonization by invasive plant species that would be considered substantial.

Operations of the Anderson Dam tunnel are expected to have no adverse effect on native plant communities from the spread of Phytophthora due to the lack of ground-disturbing activities involved in operations.

Direct or indirect effects to riparian habitats from operations of the Anderson Dam tunnel will be similar to those described in the October 1 EA for dewatering, resulting from alteration of hydrology and the potential for some scour of channel banks downstream of the dam in winter months when releases from the reservoir need to be higher to accommodate high inflows. Some of these effects have the potential to be beneficial, however, with respect to creating conditions that are conducive to the regeneration of riparian vegetation. Operation of the Anderson Dam tunnel will not affect oak woodland communities.

Effects on waters of the U.S. and the state from the operation of the Anderson Dam tunnel are expected to be negligible because these operations are not expected to affect the limits of waters or directly impact wetlands that may occur along Coyote Creek. The reservoir level will be maintained at or near deadpool, so operation of the Anderson Dam tunnel will not result in an increase or decrease of that area of federal waters.

3.2.6 Threatened and Endangered Species and Essential Fish Habitat

A number of federally-listed threatened and endangered species may occur in the project area. The *October 1 EA Table 10* provides a list of the federally-listed species that may occur in the proposed project boundary and those with identified critical habitats. The *October 1 EA Section 3.3.6.1 Affected Environment* discusses the likely presence of ESA-listed species in areas of the FOCP.

The October 1 EA concluded that the FOCP is likely to adversely affect the Coyote ceanothus, California tiger salamander, and California red-legged frog. Compliance with the SCVHP, implementation of BMPs and plans including a Phytophthora Pathogen Management Plan, Wetland and Riparian Habitat Dryback Monitoring Plan, invasive species monitoring and control plans, and a plan to monitor for amphibian disease will offset the project's effects on these species.

Commission staff concluded in the October 1 EA that the drawdown may affect and is likely to adversely affect steelhead. The drawdown of Anderson Reservoir, and the interim operations prior to the CVP extension and operation of chillers, will likely affect juvenile O. mykiss during summer and fall months due to diminished water quality, increased potential for dryback, and increased sedimentation. The anticipated water quality issues may affect, and are likely to adversely affect O. mykiss juveniles. Sedimentation will likely adversely affect early life stages, particularly if there are sequential storm events. The physical and biological features (PBFs) of critical habitat that will likely be adversely affected are water quality and quantity and floodplain connectivity of the rearing habitat. The adverse effects will be minimized through implementation of the Fish Rescue and Relocation Plan, the use of chillers, identification of suitable temperature thresholds, fisheries monitoring, and water temperature and sediment monitoring through various plans discussed in the October 1 EA. Commission staff recommended in the October 1 EA that Valley Water develop a Sediment and Turbidity Monitoring Plan, a Water Temperature Monitoring Plan, Supplement to the Fish Rescue and Relocation Plan, Fisheries Monitoring Adaptive Management Plan, models for forecasting streamflow and water temperature conditions, and an Invasive Species Plan.

The October 1 EA did not specifically examine effects to fisheries and aquatic resources from several actions proposed by Valley Water. These include construction

and operation of the low-level outlet tunnel, channel and bank erosion measures in Coyote Creek, replacement of the Coyote percolation dam, Coyote Creek flood management measures, and reopening of the historical Coyote Creek channel. The October 1 EA also did not review benefits to threatened and endangered species that would be provided by Valley Water's compliance with the conditions of the WQC issued by the Water Board on November 9, 2020.

3.2.6.1 Affected Environment

See the *October 1 EA Section 3.3.6.1 Threatened and Endangered Species and Essential Fish Habitat- Affected Environment* for an overview of the affected environment for Coyote ceanothus; California tiger salamander; California Red-Legged Frog and Critical Habitat; Southern DPS North American Green Sturgeon and Critical Habitat; Central California Coast DPS Steelhead and Critical Habitat; and Magnuson-Stevens Fishery Conservation and Management Act (MSA)--EFH for the FOCP.

Central California Coast DPS Steelhead and Critical Habitat

The *October 1 EA Section 3.3.4.1 Aquatic Resources* described the pool and weir fish ladder at the Coyote percolation dam but did not fully describe the dam; a description of the dam and radial gates is provided in *Supplemental EA, Section 3.3.4.1 Aquatic Resources*. With these modifications, the information in Section 3.3.4.1 of the October 1, 2020 EA adequately describes the aquatic resources that would be affected by the construction and operation of the low-level outlet tunnel, channel and bank erosion measures in Coyote Creek, replacement of the Coyote percolation dam, Coyote Creek flood management measures, and reopening of the historical Coyote Creek channel proposed in Valley Water's Plan.

3.2.6.2 Environmental Effects

The Bay checkerspot butterfly, Metcalf Canyon jewelflower, Santa Clara Valley dudleya, and Tiburon paintbrush are not expected to be directly disturbed, injured, or killed by the proposed project given survey data finding none of these listed species in the FOCP area. Commission staff concludes that the FOCP will have no effect on the Bay checkerspot butterfly, Metcalf Canyon jewelflower, Santa Clara Valley dudleya, or Tiburon paintbrush. Green sturgeon are not found within Coyote Creek and therefore are not in the action area, and their critical habitat is located within the downstream tidally influenced reaches, outside of the anticipated area of described effects. Commission staff concludes that the FOCP will have no effect on green sturgeon.

Coyote Ceanothus

No Coyote ceanothus are present in areas where they could be affected by the creek channel and bank erosion control modifications, Coyote percolation dam replacement, or Coyote Creek flood management measures.

Anderson Dam tunnel construction activities, such as grading, excavation, and placement of new structures and soil stockpiles could have both direct and indirect adverse effects on Coyote ceanothus. Proposed FOCP construction activities may affect these plants through direct disturbance of vegetation and disturbance, modification, or destruction of habitat, and may affect them indirectly through damage to underground root structures. In addition, equipment use, vehicular traffic, and worker foot traffic may result in the injury, mortality, altered growth, or reduced seed set of individual plants. These activities could result in the loss of 38 individual Coyote ceanothus plants, as well as the loss of suitable habitat for this species (Horizon Water and Environment. 2020). Therefore, Commission staff conclude that low-level outlet tunnel construction is likely to adversely affect Coyote ceanothus.

Other construction activities that could adversely affect Coyote ceanothus include:

- Creating access routes and staging areas that may result in the mechanical or physical removal of vegetation and modification of the seed bank due to grading.
- Refueling of equipment on location, and fuel or oil spills that may occur during refueling.
- Generating of dust by construction activities that may coat vegetative and floral surfaces, interfere with normal gas exchange, photosynthesis, or pollination, and serpentine communities disturbed by Project activities.
- Creating of disturbed conditions conducive to invasion by nonnative plants.

Plant pathogens such as Phytophthora may be spread via equipment, tools, personnel, or movement of dirt and vegetation around the ADTP site. Diseases caused by Phytophthora species include root rots, stem cankers, and fruit and leaf blight. Recent studies have addressed effects on native plants in the Bay Area and northern California native habitats and have detected Phytophthora at Anderson Reservoir and vicinity (Phytosphere Research 2015a, 2015b, 2018). Primarily spread via contaminated soil and water (some species are aerially dispersed), Phytophthora pathogens can affect plants in a variety of habitats, from dry chaparral and woodland to mesic wetlands and riparian plant communities. Once introduced into native habitats, Phytophthora persists in soil and infected host roots. Once Phytophthora infestations expand beyond very limited areas, they are very difficult to impossible to eradicate (Swiecki and Bernhardt 2014).

Phytosphere Research (2018) conducted extensive sampling to determine the extent of Phytophthora infestations in key Santa Clara County park and preserve lands and within populations of the federally-endangered Coyote ceanothus. At Anderson Dam and reservoir, a localized infestation involving multiple Phytophthora species was detected in Coyote ceanothus−dominated habitat on the western dam abutment. In addition, Phytophthora was detected at a location along Lake View trail, and in association with high-water flooding at the boat launch, northeast of the boat launch on the reservoir's south shore, and east of the spillway along the reservoir's north shore. Other sampling locations near Lake View trail and north of the spillway on the south-facing slope were not contaminated with Phytophthora. Phytosphere Research (2018) determined that the risk of Phytophthora contamination is greatest in planted areas such as for restoration or landscaping, as well as low-lying areas subject to periodic flooding; habitats dominated by woody plants; and high-traffic, disturbed areas, such as along trails. Wet conditions also favor the spread of Phytophthora through greater survival and infectivity of the organisms and through the increased movement of soil and debris.

During construction of the Anderson Dam tunnel, which will involve substantial ground-disturbing activities, Phytophthora could be spread from contaminated off-site locations onto uncontaminated on-site areas, and from on-site contaminated areas to uncontaminated areas on-site and off-site. Phytophthora infestations can spread to novel areas through the movement of contaminated plant material, roots, or soil, through activities such as clearing and disposal of vegetation, and relocation of soil between the dam and stockpile areas. In addition, boots, tools, vehicles, and equipment that have moved through contaminated areas can then deposit Phytophthora spores or infected debris in uncontaminated areas. The use of water from contaminated watercourses for dust control or other applications can also move spores or infected debris into uncontaminated areas. Spread of contamination could then result in long-term impairment of the health of native vegetation, including Coyote ceanothus, potentially resulting in declines in abundance of this species.

Clearing of vegetation for the ADTP could also potentially create open habitat conducive to colonization by Coyote ceanothus. As a result, long-term effects from colonization of Coyote ceanothus may offset the estimated loss of 38 individuals that could be affected by the ADTP. Nevertheless, according to the SCVHP, all effects on Coyote ceanothus are considered permanent because the project area (and ceanothus population) will not be restored to baseline conditions within one year following completion of the FOCP.

Operation of the ADTP is not expected to result in adverse effects on Coyote ceanothus. Because all individuals within the ADTP footprint are expected to be lost during construction, tunnel maintenance activities following completion of construction are not expected to directly impact individuals unless ceanothus recolonizes the impact area. If recolonization occurs and future propagules within the ADTP footprint are

affected, the net effect of ADTP construction and maintenance will result in the loss of no more than 38 individual plants, relative to baseline conditions. Maintenance activities could result in indirect affects to ceanothus individuals outside the ADTP footprint (e.g., via dust mobilization or spread of Phytophthora).

Adherence to SCVHP conditions and implementation of Valley Water's BMPs (*October 1 EA Appendix A*) will reduce effects on the Coyote ceanothus from ADTP construction, operations, and maintenance.

California Tiger Salamander

Anderson Dam tunnel construction activities, including grading, excavating, and placing new structures and soil stockpiles, will result in the permanent and temporary loss of California tiger salamander foraging and dispersal habitat, and could potentially result in the loss of individuals. Per the SCVHP, all land cover types that occur in the FOCP component areas, aside from reservoir and urban-suburban, provide potential habitat for California tiger salamander. Construction activities may result in the injury or mortality of individuals as a result of worker foot traffic, equipment use, vehicular traffic, vegetation removal, and earth movement. Seasonal movements of California tiger salamanders may be temporarily affected during construction because disturbance and substrate vibrations may cause individuals to move out of refugia, exposing them to a greater risk of predation or desiccation. Lighting from nighttime work may spill into areas outside the construction footprint, potentially subjecting individuals to increased risk of predation attempts. Petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals, although BMPs to control releases of such chemicals make this unlikely. Also, increases in human concentration and activity in the vicinity of suitable habitat may result in an increase in native and non-native predators that would be attracted to trash left at the work site and would prey opportunistically on these species. Movement of construction personnel within the site and between on-site and off-site areas, could also spread pathogens such as chytrid fungus, which can impair the health of amphibians such as the California tiger salamander. Commission staff determine that low-level outlet tunnel construction will likely adversely affect California tiger salamanders. A number of Valley Water's proposed BMPs, FWS's recommended measures, and SCVHP conditions, such as trash and decontamination protocols will avoid or minimize these effects to the extent possible.

Operation of the ADTP is not expected to result in adverse effects to California tiger salamanders, which do not use either Anderson Reservoir or Coyote Creek. Future tunnel maintenance activities following completion of construction could potentially affect individuals that have dispersed into the area if any upland refugia (such as small mammal burrows) are disturbed during maintenance, but that will depend largely on the type and scope of the maintenance activity. Valley Water will need to consider any

potential effects to California tiger salamander with any future maintenance activities associated with the completed tunnel.

There is potential for low numbers of California tiger salamanders to be present on portions along the banks of Coyote Creek where channel and bank erosion work will occur. There is a very low potential for this species to be present in the construction footprint of the Coyote percolation dam replacement, but it is possible that an occasional dispersant may occur in those areas. As we've said, all land cover types that occur in these FOCP component areas, aside from reservoir and urban-suburban, provide potential habitat for the California tiger salamander. Therefore, implementation of these FOCP components will result in the modification or loss of potential habitat for this species and could potentially result in injury or mortality of low numbers of individuals.

No California tiger salamanders are present in areas of the Coyote Creek flood management measures. The proposed flood management measures are deep within the extensive urban area of San Jose and are separated from extant populations California tiger salamanders (and suitable habitat for the species) by miles of urbanization.

California Red-legged Frog

Anderson Dam tunnel construction activities, creek channel and bank erosion control modifications involve grading, excavating, and placing new structures and soil stockpiles that will result in the permanent and temporary loss of CRLF foraging and dispersal habitat, and could potentially result in the loss of individuals. According to the SCVHP, all land cover types that occur in these FOCP component areas, aside from reservoir and urban-suburban, provide potential CRLF habitat. Construction activities may result in the injury or mortality of individuals as a result of worker foot traffic, equipment use, vehicular traffic, vegetation removal, and earth movement. Seasonal movements of CRLF may be temporarily affected during construction because of disturbance and substrate vibrations may cause individuals to move out of refugia, exposing them to a greater risk of predation or desiccation. Lighting from nighttime work may spill into areas outside the construction footprint, potentially subjecting individuals to increased risk of predation. Petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals, although BMPs to control releases of such chemicals make this unlikely. Also, increases in human concentration and activity in the vicinity of suitable habitat may result in an increase in native and non-native predators that would be attracted to trash left at the work site and that would prey opportunistically on these species. Movement of construction personnel within the site, and between on-site and off-site areas, could also spread pathogens such as chytrid fungus, which can impair the health of amphibians such as the CRLF. Commission staff determined that low-level outlet tunnel construction will likely adversely affect CRLF. A number of Valley Water's proposed BMPs (*October 1 EA Appendix A*), FWS's recommended measures, and SCVHP conditions, such as those

addressing trash and decontamination protocols would avoid or minimize these effects to the extent possible.

Following construction of the Anderson Dam tunnel, Valley Water will operate and maintain the deadpool condition within the reservoir until ADSRP implementation begins. As a result, water will be released from Anderson Dam at roughly the same rate as inflow to the reservoir. Releases will fluctuate according to precipitation and inflow from tributaries to the reservoir, thus resembling the natural hydrograph (although the presence and continued operation of Coyote Dam upstream still influences flows into Anderson Reservoir from Coyote Creek). Flows in Coyote Creek downstream from Anderson Dam will be higher following storm events but low during the dry season. As a result, it is possible that the frequency and magnitude of high flows in Coyote Creek downstream from Anderson Dam may increase, relative to the baseline condition, and that dry-season flows in downstream reaches of the creek will be lower than they are currently. High flows during storm events are not expected to injure or kill the occasional dispersing CRLF in Coyote Creek downstream from Anderson Dam, as those flows will ramp up naturally following rain events, providing frogs the opportunity to move away from any areas where flows are too high. Very high flows could potentially cause erosion and scour resulting in the loss of riparian vegetation along the channel and vegetative cover for frogs. Tunnel maintenance activities following completion of construction could potentially affect individuals that have dispersed into the ADTP footprint following completion of construction if any refugia are disturbed during maintenance.

There is potential for occasional dispersing of CRLF to occur in the construction footprint of the Coyote percolation dam replacement. Although as we've said, the frequency of this species' occurrence in these areas is likely low, all land cover types that occur in these FOCP component areas, aside from reservoir and urban-suburban, provide potential CRLF habitat. Therefore, implementation of these FOCP components would result in the modification or loss of potential habitat for this species, and could potentially result in injury or mortality of low numbers of individuals in the manner described for ADTP construction.

The reaches of Coyote Creek and adjacent uplands where Coyote Creek flood management measures will occur as part of the FOCP are deep within the extensive urban area of San Jose and are separated from extant populations of CRLF (and suitable habitat for the species) by miles of urbanization. Therefore, this species is not expected to occur in Coyote Creek flood management areas. Nevertheless, the SCVHP maps Coyote Creek adjacent to these flood management work areas as potential breeding habitat. Implementation of these measures will result in effects to areas outside the creek banks, but no effects to the aquatic habitat or potential CRLF habitat are expected to occur.

Steelhead

Construction of Low-level Outlet Tunnel and Implementation of Creek Channel Bank Erosion Measures

Construction of the ADTP is likely to extend over three winter precipitation seasons, with construction anticipated to be completed in December 2023. Construction will require temporary flow diversion and localized dewatering of Coyote Creek in two areas immediately downstream of Anderson Dam (approximately 60 ft and 400 ft long) (*Supplemental EA, Figure 6*), as described in *Supplemental EA Section 3.2.4 Aquatic Resources*. Throughout construction, Valley Water will implement BMPs that will minimize potential adverse effects from ground disturbing activities, erosion, dewatering, and construction equipment spills or leaks into the channel. Valley Water is also required to submit a dewatering and fish rescue plan for NMFS and California DFW to review and approve prior to the localized dewatering activities. Additionally, measures contained in the condition 2 of the WQC will require Valley Water to develop a construction plan with provisions including, but not limited to: procedures for dewatering and diversion; fish protection measures and monitoring, and identification of actions that will be performed if adverse effects to fish are identified during monitoring; and implementation of ramping rates and flows during construction.

With these measures in place, the risk for juvenile *O. mykiss* being stranded during dewatering activities is expected to be low. Further, Valley Water's use of BMPs, in addition to water quality monitoring in construction areas, will limit the potential effects of construction activities to be temporary, localized increases in turbidity and suspended sediment. Any construction-related turbidity plumes are expected to dissipate and return to baseline levels shortly after cessation of activities, and adult and juvenile *O. mykiss* in the Coyote Creek are capable of avoiding these disturbances with minimal risk of injury. Valley Water will initiate additional fish rescue and relocation efforts based on the water quality monitoring in the construction area, if necessary. Construction of the channels and ADTP is therefore not likely to adversely affect steelhead, and no destruction or adverse modification of critical habitat will result from the tunnel construction and channel modifications. NMFS recommended that Valley Water develop and implement measures to avoid and minimize construction-related effects to steelhead and critical habitat when building the ADTP. This measure is discussed below in *Supplemental EA Section 3.2.6.3 Conservation Recommendations*.

Construction of Coyote Percolation Dam Replacement

Valley Water proposes to replace the Coyote percolation dam with an inflatable rubber dam, which would allow for rapid management of the percolation pond compared to the current flashboard dam. Specific construction activities and schedule are described in *Supplemental EA Section 3.2.4 Aquatic Resources*.

To accommodate construction, Valley Water will install a temporary cofferdam to isolate the existing dam and fish ladder, dewater a section of Coyote percolation pond, and divert flow around the area (Stillwater Sciences 2020a). Throughout construction, Valley Water will implement BMPs that will minimize potential adverse effects from ground disturbing activities, erosion, dewatering, and construction equipment spills or leaks into the channel. Valley Water is also required to submit a dewatering and fish rescue plan for NMFS and California DFW review and approval prior to the localized dewatering activities.

Because the site is located 11 miles downstream of Anderson Dam and does not provide spawning, rearing, or feeding habitat, *O. mykiss* are not expected to reside in the area. However, migrating *O. mykiss* will be using the site during the migratory season (December through May; *October 1 EA Table 12*). In general, Commission staff expects that the fish rescue effort conducted prior to localized dewatering and use of BMPs and water quality monitoring in construction areas will minimize *O. mykiss* exposure to degraded water quality associated with localized dewatering and turbidity plumes. The schedule attached to the January 19, 2021 monthly progress report indicates that construction of the Coyote percolation dam replacement will be completed within a timeframe that avoids the migratory season (approximately spring through December 2023) and therefore will not pose an adverse effect to migrating juveniles or adults, and will not affect the migration corridor PBFs of designated critical habitat for *O. mykiss*.

The phased approach to construction is still under development, as described in Valley Water's September 25, 2020 letter and NMFS's November 23, 2020 and January 28, 2021 letters. Phase 1 activities consist of installing the new bladder dam and its foundation and retrofitting the weir panels of the existing fishway to enhance fish passage; Phase 2 activities consist of modifying Coyote Creek downstream of the dam to allow fish to safely pass over the deflated bladder.[38] The proposed schedule does not indicate a start date for construction, but states that the feasibility analysis for Phase 2[39] will be completed by July 2021, with the results used to inform Phase 1; Phase 1 will be completed by December 2023; and Phase 2 will be completed no later than 2027, assuming Valley Water receives the proper permits to construct the project in a timely manner. Valley Water's September 25, 2020 letter indicates that it has committed to

[38] Valley Water states that if during the design process an alternative means for passing fish safely and timely over the range of expected flow conditions at the Coyote percolation dam is developed, this alternative may be implemented with the approval of NMFS, California DFW, FWS, and other regulatory agencies with jurisdiction.

[39] The feasibility analysis of Phase 2 downstream channel modifications will be developed as a part of the ADSRP permitting process in coordination with NMFS, California DFW, FWS, and other regulatory agencies with jurisdiction.

design and construct the dam replacement in a manner that provides for unimpeded upstream and downstream fish passage over the deflated bladder to the maximum extent practicable, and in a manner consistent with the FAHCE agreement for Coyote Creek.[40] NMFS's January 28, 2021 letter indicates that a fish passage subcommittee consisting of NMFS, California DFW, and Valley Water has discussed the bladder dam design.

We expect that Valley Water's ongoing consultation on the phased approach to construction will result in additional information about the construction schedule and specific activities that would temporarily block the fish ladder, such as installation of the cofferdam. This information has not yet been determined and therefore cannot be analyzed in the Supplemental EA. In general, based on the proposed schedules available, construction of the Coyote percolation dam replacement is not expected to adversely affect to migrating juveniles or adults and will not affect the migration corridor PBFs of designated critical habitat for *O. mykiss*, because construction would occur outside of the passage season and implementation of BMPs would minimize any adverse effects to water quality.

NMFS has recommended that Valley Water develop and implement measures to avoid and minimize construction-related effects to steelhead and critical habitat when building the ADTP and replacing the Coyote percolation dam. Further, NMFS has expressed concern that the design of Phase 1 could quickly proceed to a stage beyond which NMFS' recommendations could be incorporated. NMFS recommends regular meetings between Valley Water's design team and NMFS's fish passage engineer to develop milestones so that Phase 1 adequately considers and incorporates design elements that allow for successful fish passage in Phase 2, and also recommends that Phases 1 and 2 of the percolation dam replacement should be designed to provide fish passage across the deflated bladder over a wide range of flow conditions. NMFS's recommendations are discussed more thoroughly below in the *Supplemental EA, Section 3.2.6.3 Conservation Recommendations,* including our analysis of the measures.

Coyote Creek flood management measures

The Coyote Creek flood management measures have been developed to avoid and minimize downstream flooding within urbanized areas of Coyote by helping keep flows in the channel. Valley Water will construct three flood protection measures located along

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[40] Specifically, the proposed operation will be consistent with Measure 6.4.2.1.1 (D) of the FAHCE agreement, which describes seasonal flow releases from Anderson Reservoir and modified operations of the Coyote percolation pond to minimize creation and maintenance of ponds during February 1 through April 30 in order to reduce the entrainment and predation of out-migrating steelhead trout smolts. See footnotes 33 and 34 in the October 1 EA for more information about the FAHCE agreement.

three reaches of Coyote Creek between Interstate 280 and Oakland Road. This reach is within the extensive urban area of San Jose far downstream of the CWMZ and does not provide spawning, rearing, or feeding habitat for *O. mykiss*, but is used during upstream and downstream migrations during the passage season (December through May; *October 1 EA Table 12*). The current construction schedule could overlap with at least one migration season (Valley Water's January 19, 2021 monthly progress report does not provide a start date but indicates construction would be completed December 2023). During construction activities, migrating *O. mykiss* have the potential to be affected by degraded water quality due to erosion and equipment leaks, localized dewatering, and anthropogenic noise resulting from pile installation.

Throughout construction, Valley Water will implement BMPs that will minimize potential adverse effects from ground disturbing activities, erosion, dewatering, and construction equipment spills or leaks into the channel. As we've said, Valley Water is required to submit a dewatering and fish rescue plan for NMFS and California DFW review and approval prior to the localized dewatering activities. Additionally, measures contained in the condition 7 of the WQC will require Valley Water to develop a construction plan with provisions including, but not limited to: procedures for dewatering and diversion; fish protection measures and monitoring; and water quality monitoring. With these measures in place, the risk for stranding of adult or juvenile *O. mykiss* during dewatering activities is low. Further, Valley Water's use of BMPs, in addition to water quality monitoring in construction areas, will limit the potential effects of construction activities to temporary, localized increases in turbidity and suspended sediment. Any construction related turbidity plumes are expected to dissipate and return to baseline levels shortly after cessation of activities, and adult and juvenile *O. mykiss* in the Coyote Creek are capable of avoiding these disturbances with minimal risk of injury. Valley Water will initiate additional fish rescue and relocation efforts based on the water quality monitoring in the construction area, if necessary.

Valley Water proposes to install the off-channel floodwall sheet piles using a silent piling technology. This is a non-dynamic method for the installation of steel sheet piles that presses the sheet piles in place without hammering or vibrations, and is considered appropriate for environmentally sensitive construction sites. Therefore, the method is not expected to result in direct injury to fish (Popper and Hastings 2009). If there are low-energy sounds generated during construction, any avoidance behavior or potential displacement is expected to be temporary and opportunities for fish to pass will occur at night (dusk to dawn) when construction activities cease.

The construction activities during December through May and has the potential to temporarily affect the migration corridor PBFs of designated critical habitat for *O. mykiss*. However, Valley Water's use of BMPs to protect water quality and the silent piling technology will reduce direct effects to critical habitat in this reach.

Project Operations After Construction of ADTP

Once the tunnel is completed, the Anderson Dam tunnel will be used primarily to allow passage of high flows, and high flows will occur downstream at a rate greater than they have in the past. The reopened north channel will be used to accommodate the increased flow rates through the existing outlet and the new dam tunnel. Valley Water will distribute the flow immediately below the dam between the north and south channels using fixed weirs to split the amount of flow that enters each channel under a given reservoir release. Under the current design, the southern channel will operate with flow rates at or less than historical release rates (approximately 500 cfs), with the remainder of releases passing through the northern channel. The lowest flows will be conveyed through the southern channel up to 100 cfs, and the northern channel will be watered during winter flows and other high flow events above 100 cfs (Valley Water 2020a, Stillwater Sciences 2020a; *Supplemental EA, Table 3*). Settling ponds upstream of the of the weirs in the north and south channels will minimize transport of coarse sediment into the channels. The distribution of flows minimizes the potential for erosion of the south channel, which would not be hardened, and the erosion protection measures installed in the north channel would be designed to withstand high velocities. A low-flow notch in the north channel weir will allow upstream passage of adult steelhead. Valley Water will line the channel with an engineered fill suitable for fish migration, and the channel banks will be lined with a biotechnical lining that will allow the growth of vegetation (URS 2020b).

In general, when the northern channel is watered, it will benefit *O. mykiss* by increasing stream habitat available downstream of Anderson Dam and by minimizing loss of stream habitat and removal of riparian vegetation in the south channel. Valley Water's ongoing consultation with the resource agencies will result in additional information about the specific habitat restoration activities or goals in the north channel, however, these measures have not yet been determined and therefore cannot be analyzed in this Supplemental EA. Operation of the two channels is not likely to adversely affect the migratory corridor, spawning, and rearing habitat PBFs of critical habitat in the southern channel, as the flows are expected to improve sediment sorting and maintenance of aerated gravel. There is not enough information available about restoration activities in the northern channel to determine the potential effect to the PBFs of critical habitat (e.g., freshwater spawning site with suitable substrate; rearing sites ample floodplain connectivity; suitable water quality and quantity; migration corridors without obstructions).

Dewatering of the north channel would occur when flows decrease and then cease flowing into the north channel following high flow events, introducing the potential for *O. mykiss* in the channel to be stranded. While adult *O. mykiss* are expected to be able to relocate in response to decreasing flows, juvenile fish and fry can becomes stranded or trapped in isolated pools. Implementation of ramping rates would help ensure the

protection of aquatic resources in the channel, as would monitoring activities to determine use of the north channel and risk for stranding. Condition 2 of the WQC requires, in part, that Valley Water develop ramping rates and flows that will be implemented during tunnel operation, including flow distribution to the northern and southern channels once operational, and conduct monitoring for fish stranding in the northern and southern channel under implementation of the new flow regime. With implementation of these measures, the potential adverse effect to *O. mykiss* in the north channel is expected to be minimal. NMFS additionally recommends that the fixed weirs eventually be replaced with adjustable weirs to allow active management of the flow split in response to varying reservoir release rates, water temperature, fish behavior, fish life-stage, and other changing conditions. This measure is discussed more thoroughly below in *Supplemental EA, Section 3.2.6.3 Conservation Recommendations,* including our analysis of this recommended measure.

Following ADTP construction, the higher releases during wet weather will also be managed with operation of the bladder dam at the Coyote percolation pond. Valley Water will lower the bladder dam to allow flows in excess of 800 cfs to pass safely. Under conditions anticipated following completion of ADTP, high flows will occur downstream at a rate greater than they have in the past (*Supplemental EA Section 3.2.2.2 Water Quantity*), and Valley Water conservatively estimates that the bladder dam will need to be deflated at least once a year (Stillwater Sciences 2020a). Current information does not estimate the duration of time the dam will be lowered. However, when the bladder dam is lowered to pass flows over 800 cfs, upstream migrating adult *O. mykiss* are likely unable to swim against the velocities to ascend past the dam, and the tailwater flow is likely to mask attraction flow to the ladder. Time spent searching for upstream passage routes can be energetically costly for anadromous fish and if prolonged can adversely affect spawning success (Caudill et al 2007). Further, if the bladder dam is lowered during smolt outmigration, the smolts will be adversely affected by injury and mortality due to contact with the concrete foundation, grouted rock channel bed, and any debris present below the dam.

In addition to lowering the bladder dam to pass flows in excess of 800 cfs, Valley Water proposes to operate the bladder dam to displace non-native warmwater-adapted fish present in the Coyote percolation pond and to provide flushing pulse flows for migrating fish. These measures would benefit *O. mykiss* smolts by promoting the migratory corridor PBFs of critical habitat, specifically, velocity refugia so migrating fish arrive at the ocean successfully and with the necessary energy stores. Migration during high-flow events can be energetically advantageous for smolts and can provide protection from visual predators (Aldvén and Höjesjö 2015). Displacement of the non-native predatory fish in the Coyote percolation pond will have a beneficial effect for *O. mykiss* by reducing the potential for predation on the smolts and competition for food resources.

Operation of the bladder dam and modifications to the fish ladder have the potential to affect the migration corridor PBFs of designated critical habitat for *O. mykiss*. Currently, information about the proposed operation of the fishway and bladder dam under expected flow conditions, such as how the attraction to the ladder and passage through it will be affected by the bladder dam operations, or how the site will be designed to provide passage over the deflated dam through a range of flows, is not available and therefore not analyzed in the Supplemental EA. Similarly, the timing, frequency, magnitude, and duration of the planned flow releases to displace non-natives, flush sediment, and provide flow pulses for migration are not currently available and therefore not analyzed in the Supplemental EA. As described above and in *Supplemental EA Section 3.2.4.2 Aquatic Resources*, Valley Water is continuing to evaluate the existing facility. Consultation between Valley Water, resource agencies, and stakeholders for the proposed fish ladder modifications and inflatable dam design and operations is ongoing, and Valley Water has committed to further evaluations of these components and other feasible alternatives throughout the ADSRP consultation process (Stillwater Sciences 2020a). NMFS has recommended that Valley Water develop a comprehensive Fish Passage Design Plan, including hydraulic modeling and design considerations to allow for effective fish passage at the dam and through the fishway under a range of flow conditions and dam operations to ensure effective fish passage at the facility, which are discussed in *Supplemental EA, Section 3.2.6.3 Threatened and Endangered Species and Essential Fish Habitat - Conservation Recommendations*.

As described in *Supplemental EA Section 3.2.3.2 Water Quality*, sediment from Anderson Reservoir will be mobilized and transported through the tunnel during large storm events. Though coarse sediment will be trapped and settling pools will allow sediment to be trapped, due to the limited capacity of the existing and proposed outlets, any significant storm event will cause an increase in the water surface elevation that will inundate erodible sediments. During operation of ADTP, high flow events will result in an increase in TSS in Coyote Creek above existing conditions. This will cause short-term adverse effects to water quality and aquatic habitat in Coyote Creek downstream of the dam, while the reservoir is lowered back to 488 ft. Sediment modeling with operation of the tunnel outlet and existing outlet predicts successive peaks of suspended sediment concentrations during back-to-back two-year annual recurrence interval events ("worst case" scenario), the concentration of TSS downstream of the reservoir will exceed 5,000 mg/l for approximately 2 days, then will drop below 200 mg/l after 3.5 days as sediment is diluted of settles out (*Supplemental EA Figure 9*; URS 2020b; Stillwater Sciences 2020c).

Back-to-back two-year annual recurrence interval events that occur December through April will result in minor physiological stress such as increased coughing and respiration rate, which will result in a sublethal effect to migrating adult *O. mykiss*. Due to the duration of exposure, it is not likely to substantially affect migration. However, this scenario of back-to back storms occurring after spawning will result in up to 20

percent mortality for incubating eggs due to the duration and concentration of TSS (Stillwater Sciences 2020a). Back-to-back two-year annual recurrence interval events that occur December through May will result in sublethal effects to fry and juveniles, causing reduced feeding rates and feeding success, minor physiological stress, and potentially increasing coughing and respiration rate. This level of not expected to substantially affect rearing due to the short duration (Stillwater Sciences 2020a). As discussed in *October 1 EA Section 3.3.6.2 Threatened and Endangered Species*, the direct effects to individual *O. mykiss* behavior are expected to be temporary and are expected to subside as sediment settles out or is flushed downstream; however, the temporary behavior changes can result in reduced growth and survival for juveniles and reduced spawning success for adults, which can culminate in population-level effects to the Coyote Creek *O. mykiss*. The effects of the of two-year annual recurrence interval events on steelhead described above are considered to be representative of larger flood events as well due to the 2,500 cfs capacity reservoir outflow; larger storms generating higher flows will fill the reservoir and are not expected to significantly increase suspended sediment concentrations compared with the two-year event.

Valley Water will monitor water quality and conduct fisheries sampling in the CWMZ during the FOCP to inform the need for future fish rescue efforts throughout the duration of the drawdown and construction activities. The fish rescue effort will adversely affect steelhead through capture stress, but this is to prevent lethal take that will otherwise result from exposure to poor water quality. Condition 2 of the WQC requires Valley Water to implement the Anderson Dam Tunnel Plan, which includes, in part, identification of activities that will occur during construction, operation, and maintenance of the Anderson Dam tunnel with the potential to affect water quality or beneficial uses, as well as measures that will be implemented to protect water quality and beneficial uses, including but not limited to measures for sediment and erosion control and protection of endangered and threatened species. Additionally, condition 8 of the WQC requires Valley Water to develop a Mercury, Diazinon, and PCBs Plan, which is expected to allow Valley Water to determine the risk of contaminates in the sediment to mobilize and enact appropriate remediation measures to protect the aquatic habitat. Valley Water will also implement the Sediment Discharge Monitoring Plan and will monitor effects to spawning gravel habitat in the CWMZ during the FOCP, which is expected to identify the effects of sedimentation on habitat in Coyote Creek throughout FOCP, and can be used to inform mitigation or restoration actions. There will be adverse effects to critical habitat as a result of sedimentation, but with implementation of the monitoring plans, the effects do not rise to the level of destruction or adverse modification of critical habitat.

Due to the magnitude and duration of expected effects of sediment and construction of the ADTP, NMFS recommends implementation of a gravel augmentation program and completing one or more large-scale channel and floodplain restoration actions on Coyote Creek. This measure is discussed more thoroughly below in

Supplemental EA Section 3.2.6.3 Conservation Recommendations, including our analysis of this recommended measure.

During the ADTP operation, there is potential for continued drying of Coyote Creek during the dry summer and fall seasons compared to existing conditions because reservoir storage will be diminished (Stillwater Sciences 2020a). As analyzed in the October 1 EA, imported water releases and normal operation of Coyote reservoir will maintain flow throughout Coyote Creek during operation of the ADTP, contingent upon water availability. Direct or indirect effects of temperature to *O. mykiss* in Coyote Creek from operations of the ADTP will be similar to those described in the October 1 EA for dewatering. As discussed in *Supplemental EA Section 3.2.2 Water Quantity*, the Coyote Creek flood management measures are expected to prevent flooding in certain areas and restrict water to the creek channel only in particular locations, which will increase the volume and velocity of water in the creek. The reach will remain highly channelized through the urban environment and will continue to serve as a migration corridor for *O. mykiss*.

Essential Fish Habitat

The action area includes areas designated as EFH for various life-history stages of *O. mykiss* and Central Valley fall-run Chinook salmon in the Santa Clara Hydrologic Unit (hydrologic unit code 2205). Affected portions of EFH include migratory corridors, spawning habitat, and rearing habitat for *O. mykiss* and Chinook salmon. As described above, implementation of FOCP may result in short and long-term effects, both positive and negative, to a variety of habitat parameters. The potential adverse effects on EFH for *O. mykiss* and fall-run Chinook salmon are the same as those described for the ESA-listed salmonids and their critical habitat, therefore, the effects analysis addresses effects of the proposed action to steelhead and fall-run Chinook EFH.

On September 15, 2020, NMFS stated that several components of the FOCP will result in adverse effects to EFH, including degraded water quality, fine sediment deposition, and impaired fish passage. NMFS confirmed that their recommendations submitted in the August 31, 2020 letter also serve as their recommendations under the emergency consultation procedures of the MSA. NMFS's recommendations to minimize and mitigate these effects on threatened CCC steelhead and their critical habitat will also apply to EFH for Chinook salmon.

Conservation recommendations provided by NMFS on August 14 and 31, 2020, summarized in below in *Supplemental EA Section 3.2.6.3 Conservation Recommendations* with the exception of measures associated with fish rescue/relocation and those measures addressed in the October 1 EA, are applicable to Chinook salmon and serve as dual purpose for EFH. Based on the above analysis, although aspects of the

proposed action are expected to result in adverse effects on EFH, all reasonable actions for minimizing FOCP effects are included in the proposed action and in Commission staff recommendations. Therefore, Commission staff conclude that the proposed action will not adversely affect EFH.

3.2.6.3 Conservation Recommendations

The *October 1 EA Section 3.3.6.3 Conservation Recommendations* discusses the conservation recommendations filed by FWS and NMFS pursuant to the emergency provisions of Section 7 of the ESA for the FOCP, most specifically related to the drawdown. The *October 1 EA Section 3.3.6.3 Conservation Recommendations* noted that analysis of a number of recommended measures provided by NMFS would be deferred until this Supplemental EA. Commission staff supplement the October 1 EA with further analysis, below.

FWS Recommended Measures

The October 1 Order required Valley Water to develop and implement a number of plans. While the October 1 Order acted on Valley Water's Plan in part for those proposed actions associated with the reservoir drawdown, some of those plans may need to be supplemented to capture tunnel construction and downstream areas which may not be covered by those plans. Commission staff therefore recommend Valley Water review the following required plans and supplement, if needed, to include construction and impact areas for the full FOCP:

- Phytophthora Pathogen Management Plan
- Wetland and Riparian Habitat Dryback Monitoring Plan
- Milkweed Survey Plan

Valley Water should also continue to comply with the SCVHP.

NMFS Recommended Measures

On August 14, 2020, NMFS provided 4 conservation recommendations specific to the Fish Rescue and Relocation Plan, and on August 31, 2020, NMFS provided 12 conservation recommendations specific to the FOCP actions. In a letter filed September 15, 2020, NMFS confirmed that the recommendations contained in the August 31, 2020 letter will also apply to EFH for Chinook salmon. On September 25, 2020, Valley Water filed a letter describing resolution between it and NMFS with regard to NMFS's August 31, 2020 recommendations for: (1) adjustable weirs below Anderson Dam; (2) fisheries monitoring in Coyote Creek; and (3) fish passage at the Coyote percolation dam. On November 23, 2020, NMFS concurred that resolution was reached regarding the weirs

and fisheries monitoring, and provided additional clarification about passage design process for the Coyote percolation dam replacement. On January 28, 2021, NMFS provided additional comments requesting that the replacement bladder dam at the Coyote percolation pond be designed to provide unimpeded upstream and downstream fish passage over the deflated bladder at wide range of streamflows. NMFS's recommendations in the August 31, 2020 letter, as subsequently clarified or supplemented, that were not addressed in the October 1 EA are discussed here:

1. Replace or retrofit the fixed weirs at the outlet channels with adjustable weirs prior to completion of ADSRP. Develop a formal consultation process for the design of adjustable weirs, and provide the 30%, 60%, 90% and final iterations of the design for NMFS review and input. Develop the proposed operations manual, maintenance manual, and monitoring plans in consultation with NMFS.

2. Conduct fish monitoring in the north outlet channel to evaluate fish use and stranding following ADTP construction and channel reopening. Conduct surveys in consultation with NMFS immediately following all flow events that re-water the northern outlet channel.

3. Provide effective fish passage that meets current NMFS standards for the design, operation, and maintenance of fishways for anadromous salmonids at the Coyote percolation dam. Design the new facility to provide for unimpeded fish passage over a range of streamflows when the bladder dam is deflated. Modify or design the existing fishway to provide passage when the bladder dam is inflated or deflated. Develop a formal consultation process and focused workgroup to incorporate fish passage into the design plans. Provide the 30%, 60%, 90% and final iterations of the design for NMFS review and input, and develop the proposed operations manual, maintenance manual, and monitoring plans in consultation with NMFS.

4. Develop and implement a gravel augmentation program and complete one or more large scale channel and floodplain restoration actions on Coyote Creek in consultation with NMFS and the ADSRP Fisheries Technical Workgroup. Restore channel and habitat in the reach of Coyote Creek between Anderson Dam and Metcalf Road, and the approximately one-mile-long Ogier Ponds complex. Design restoration actions to restore geomorphic processes, reconnect and reactive flood terraces and floodplains, enhance riparian conditions, enhance channel complexity with placement of large wood and coarse sediment, and remove barriers.
    a. Use accumulated course gravels from the dewatered Anderson Reservoir basin to enhance spawning gravels below the dam.

b. The channel and floodplain restoration actions should be of sufficient size to enhance and restore fluvial processes, and habitat conditions for steelhead spawning and rearing.

5. Implement measures to avoid and minimize construction-related effects to steelhead and critical habitat when building the ADTP and replacement of the Coyote Percolation Dam. Design measures to avoid and minimize effects from dewatering, fish relocation, discharge of sediment, construction debris, and other potential construction-related effects. Provide site-specific avoidance and minimization measures to NMFS for review prior to initiation of construction activities in Coyote Creek.

For the 5 NMFS's conservation recommendations not previously addressed in the October 1 EA, Commission staff recommend the adoption of 4 of these 5 recommendations which fall within the Commission's jurisdiction, as modified and discussed below:

Adjustable weirs in the outlet channel

NMFS recommends that the fixed weirs at the outlet channels be replaced or retrofitted with adjustable weirs prior to completion of ADSRP, which will allow for the flow split between the two ADTP outlet channels to be modified in response to varying reservoir release rates, water temperature, fish behavior, fish life-stage, and other changing conditions. Valley Water has committed to replacement of the fixed weirs within the dual outlet channels below Anderson Dam with adjustable weirs (or another feasible engineering design solution). Design of the fixed weir replacement improvements will be developed in coordination with NMFS, California Department of Fish and Wildlife (DFW), FWS, and other regulatory agencies with jurisdiction. If during the design development process an alternative means for preventing fish stranding and adjusting the flow split between the dual channels is developed, this alternative may be implemented upon the approval of NMFS, California DFW, FWS, and other regulatory agencies with jurisdiction.

Commission staff recommends that Valley Water file a planning level design of the fixed weir replacement improvements, which will allow for active management of the flow split between the two ADTP outlet channels. Valley Water must prepare the plan in consultation with the NMFS, FWS, and California DFW, and Santa Clara Valley Habitat Agency, and County Parks.

Monitoring of the Northern Outlet Channel

The monitoring plan would improve understanding about the use of the north channel, stranding risk, and how to prevent stranding in the channel. Commission staff

recommend development of a plan to monitor and report fish use and stranding in the northern outlet channel prior to completion of ADTP.

Gravel Augmentation and Restoration Activities

NMFS's recommendation for development and implementation of a gravel augmentation program and channel and floodplain restoration activities is based on the expected effects to steelhead designated critical habitat resulting from the FOCP, specifically, sediment deposition, permanent loss of perennial stream habitat, temperature-related effects, and introduction of invasive, non-native fish during reservoir dewatering and operations at deadpool. Valley Water has stated that it is willing to collaborate with the Fisheries Technical Work Group (TWG)[41] regarding habitat restoration commensurate with predicted and measured effects in Coyote Creek resulting from the FOCP and the ADSRP. Valley Water has also stated it will monitor the physical and biological features of critical habitat in the CWMZ to confirm the scope and intensity of adverse effects to steelhead habitat from increased sediment erosion, transportation, and deposition associated with activities under the FOCP, and that this monitoring will inform implementation of phased habitat restoration activities within the CWMZ, commensurate with the FOCP. Valley Water states that phasing for implementation of CWMZ restoration measures is expected to occur in coordination with the implementation of the ADSRP to assure that ADRSP construction effects do not undermine or eliminate CWMZ steelhead habitat restoration work and its benefits (Valley Water 2020a).

Commission staff's analysis concludes that there will be adverse effects to critical habitat, and that design and planning for restoration activities now will ensure timely action is taken to improve critical habitat and that the selected restoration activities are appropriately designed for future operations at Anderson Dam. Therefore, Commission staff recommend that Valley Water develop and implement a plan and schedule for gravel augmentation and restoration activities in Coyote Creek. The plan should: (1) identify selected sites for gravel augmentation and restoration activities; (2) provide a description of selected gravel augmentation and restoration activities; (3) provide a construction and implementation schedule to ensure completion of activities by November 2028; and (4) include a monitoring or adaptive management plan to ensure function and effectiveness of the activities following construction. The gravel augmentation activities should be designed to enhance spawning gravels below the dam and should utilize the accumulated course gravels from the dewatered Anderson Reservoir basin, if feasible. The channel and floodplain restoration activities must

[41] Members of the Anderson Dam Fisheries Technical Workgroup include Valley Water, California Department of Fish and Wildlife, and National Marine Fisheries Service.

enhance and restore fluvial processes, and habitat conditions for steelhead spawning and rearing, and should be designed to restore geomorphic processes, reconnect and reactivate flood terraces and floodplains, enhance riparian conditions, enhance channel complexity with placement of large wood and coarse sediment, and barrier removal.

Site-specific Plans

Commission staff recommend that Valley Water develop a site-specific plan for construction of the ADTP, including measures designed to avoid and minimize effects from dewatering, fish relocation, discharge of sediment, construction debris, and other potential construction-related effects. The site and activity specific avoidance and minimization measures should be provided to the TWG for review prior to initiation of construction activities in Coyote Creek.

Commission staff reviewed NMFS's recommended measure for design plans and a site-specific construction plan for the Coyote percolation dam replacement. As described above, Valley Water has committed to modify the fish ladder as necessary to operate with the bladder dam, and to design and construct the inflatable bladder dam at the Coyote percolation pond in a manner that provides for unimpeded upstream and downstream fish passage over the deflated bladder to the maximum extent practicable, and in a manner consistent with the FAHCE Agreement for Coyote Creek. Staff concludes that these measures would be beneficial to in ensuring passage for *O. mykiss* and maintenance of the migratory corridor PBFs of critical habitat. However, as noted in *Supplemental EA Section 2.2.3 Valley Water's Coyote Creek Percolation Dam and Coyote Creek Flood Protection Project*, the Coyote percolation dam replacement does not serve a project purpose and Commission staff is not able to monitor the long-term compliance of measures provided by resource agencies that are one-time actions. Commission staff note that Valley Water must acquire all necessary federal, state, and local permits and land rights associated with construction and operation of the bladder dam.

3.2.7 Recreation Resources

The October 1 EA analyzed the effects of the proposed actions associated with the drawdown. Commission staff concluded that the prolonged reservoir drawdown will create moderate adverse effects for people wishing to engage in outdoor recreation pursuits at Anderson Lake County Park.

Commission staff recommended, in the October 1 EA, that Valley Water implement the recreation related avoidance and minimization measure (AMM REC-1), to provide advance notice of limited access or closure of recreation facilities and to inform potential visitors of alternative sites to pursue outdoor recreation activities. Commission staff also recommended the development of a new parking area to enhance public access to the trails in the Rosendin Park area of Anderson Lake County Park.

The *October 1 EA Section 3.3.7.2 Environmental Effects* focused on how lowering the reservoir pool in Anderson Reservoir would affect recreation sites and recreation use within Anderson Lake County Park. This supplemental EA focuses on how construction and operation of the low-level outlet, replacement of the Coyote percolation dam, and implementation of Coyote Creek flood management measures will affect the following recreation sites: Live Oak Day Use Area at Anderson Lake County Park (see Figure 10), portions of Coyote Creek Parkway County Park, City of San Jose parks (Metcalf Park, Kelley Park, William Street Park, Selma Olinder Park, and Watson Park), and segments of the Coyote Creek Trail within the City of San Jose.[42] Additional analysis regarding the development of the CVP extension is also provided below.

3.2.7.1 Affected Environment

Live Oak Day Use Area

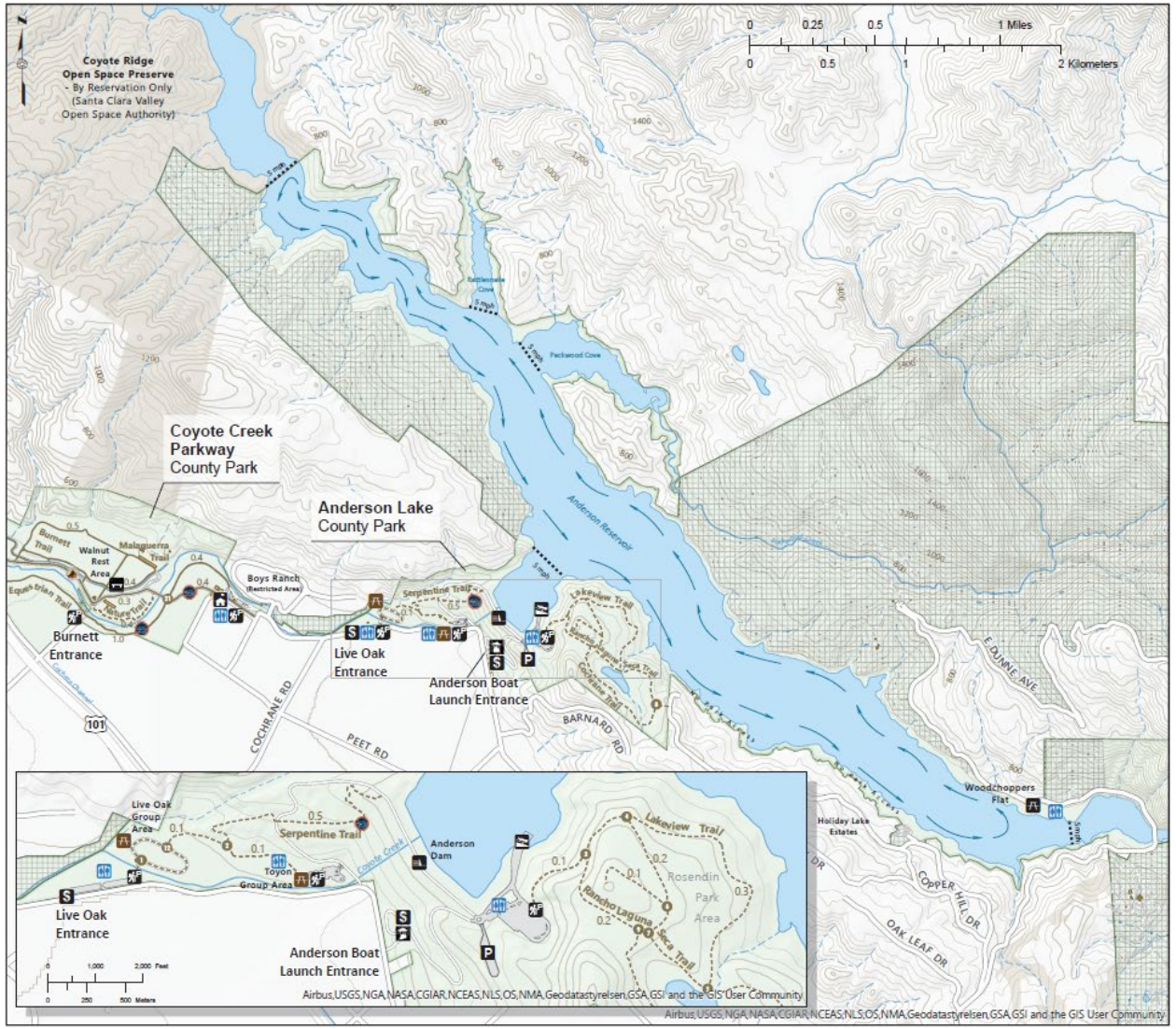
The Live Oak Day Use Area, which has an extensive tree canopy to provide shade for recreationists, is located adjacent to Coyote Creek at the base of Anderson Dam. The site includes two group picnic areas, Live Oak (accommodates 100 people) and Toyon (accommodates 75 people), as well as approximately two dozen individual picnic tables, many of which have grills for small groups. The site provides access to Coyote Creek, is the trailhead for the 0.6-mile-long Serpentine Trail, which leads hikers to the dam crest, and provides access to the Coyote Creek Trail. Restroom facilities, potable water, and parking are available at the site.

Coyote Creek Parkway

The Coyote Creek Parkway is a linear corridor of open space which includes hiking, biking, and equestrian trails as well as fishing access points, picnic sites, and a variety of other recreation facilities either adjacent to or nearby Coyote Creek between Anderson Lake County Park and Hellyer County Park. A segment of the equestrian trail located at Ogier Ponds is located directly across Coyote Creek from the planned outlet for the CVP extension.

[42] Commission staff notes that the exemption does not require any recreation facilities. Recreation facilities identified here are those which will be affected by construction and or operation of the low-level outlet.

Figure 10: Anderson Lake County Park Recreation Sites and Facilities (Source: Santa Clara County Parks and Recreation Department, 2020).



Anderson Lake
County Park

Park Hours: 8 am until sunset
Trail Hours: Sunrise to sunset
Ranger Station and Visitor Station: (408) 779-3634

In an emergency call 911.

Fees are collected for vehicles, boat launching, and mussel inspection of all boats. Entry and launch fees are posted at the entrance station. No fees charged at the trailhead.

Dogs/Pets: Allowed in all areas of the park on a 6 foot or less leash

Fires: Permitted in designated barbeque pits only. No fires on open ground or along shoreline. No wood gathering.

Weapons: Firearms, air guns, archery equipment and paintball guns are prohibited

Alcohol: Permitted in picnic and beach areas. All alcohol laws strictly enforced

Swimming: Prohibited in all lakes, streams, and reservoirs. Collecting of plant specimens or animals is not permitted.

Launching: Weekend reservations may be required. Call (408) 355-2201 to make a reservation.

Fishing: License required for all persons 16 or older.

Map Legend

- Building
- Parking Lot
- Santa Clara County Park
- Closed to Public
- Other Park or Protected Land
- Trail Junction
- Paved Hiking / Equestrian / Bicycling
- Paved Hiking Only
- Hiking / Equestrian / Bicycling
- Hiking Only
- Service Road
- Freeway
- Road
- Park Road
- Paved Service Road
- Bay Area Ridge Trail
- Lake
- Canal
- Stream
- Minor Stream
- Entry Kiosk
- Pay Station Machine
- Visitor Center
- Parking Area
- Trailhead w/ Parking Lot
- Picnic Area
- Reservable Group Picnic Site
- Restroom
- Rest Site
- Boat Launch Ramp
- Dam

Elevation Contour Interval is 40 ft

Metcalf Park and Coyote Creek Trail

The left abutment of the Coyote percolation dam is located adjacent to Metcalf Park (see Figure 3). The park includes a large fenced dog exercise area, two basketball courts, playground, pavilion, picnic sites, and a restroom. A portion of the paved Coyote Creek Trail passes along the creek side of the park and an unpaved alternative route follows the crest of the dike which impounds the reservoir.

Coyote Creek Flood Management Measures

Due to higher capacity to pass water via the new low-level outlet, periodic flood events are anticipated to occur on a two to three-year cycle. In order to mitigate the effects of these events, Valley Water proposes to install floodwalls (ranging in height from 2-9 ft), a 4-foot tall by 350 foot-long levee (tapering from 20-foot-wide at the base to 12-foot-wide at the top), and elevate or acquire up to ten structures. Installation of these measures is anticipated to take 20 months, but the timing for construction of each specific feature is unknown. As discussed below, several recreation sites will be affected by construction of the levee and floodwalls, as well as by periodic flooding.

Kelley, William Street, Selma Olinder, and Watson Parks

Kelley Park is a 172-acre site which includes the Happy Hollow Zoo with children's rides, Japanese Friendship Garden, History Park with a functioning trolley line, Viet Heritage Garden, nine group picnic areas, disc golf course, trails and other recreation amenities. Coyote Creek bisects the park with the majority of the recreation amenities located on the west side of the river linked via a footbridge to the largest parking lot on the east side of the river. William Street Park is a predominantly undeveloped 15-acre green space with a few picnic tables and a walking path (see Figure 6). Coyote Creek forms the eastern border of the park. Selma Olinder Park is a 13-acre site located across Coyote Creek from William Street Park (see Figure 6). Recreation facilities include a baseball field, playground, dog park, tennis courts, group picnic area, open fields, and a restroom. A segment of the Coyote Creek Trail traverses the park. Watson Park comprises 27 acres which include multiple playgrounds, basketball courts, large multi-purpose athletic fields, dog parks, open grass areas, picnic tables, two restrooms, paved walking paths, natural surface trails (see Figure 5).

3.2.7.2 Environmental Effects

During tunnel construction and implementation of Coyote Creek flood management measures, recreation facilities at multiple recreation sites will experience disruptions which will decrease the quality of the recreation experience for visitors. The details regarding the type and duration of the disruption for each site is detailed below. Additionally, the flood management measures were designed to concentrate flood waters

within public open space lands in order to minimize effects on residential and commercial properties, thus there will be ongoing effects to recreation facilities due to the increased capacity to release higher flows from the new low-level outlet.

Live Oak Day Use Area

The Toyon Group Picnic Area, which includes a restroom, potable water source, and parking facilities, will be displaced by tunnel construction as well as implementation of creek channel and bank erosion control measures and reopening of the historical northern channel of Coyote Creek. A portion of the remaining Live Oak Day Use Area, including the Live Oak Group Picnic Area will become an island between the north and south channels of Coyote Creek once the north channel is reopened. Additionally, several single-family picnic sites and the Serpentine Trail will be eliminated. The quality of the recreation experience for those using the remaining recreation facilities at the Live Oak Day Use Area will be diminished during the three-year construction period due to noise, the loss of vegetative cover, and the presence of security fencing. The loss of recreation facilities at the site is a moderate, long-term adverse effect to recreation resources and the diminished recreation experiences during construction is a moderate, short-term adverse effect. The loss of mature Live Oak trees will diminish the quality of the recreation experience for multiple generations, until planted trees reclaim the canopy, and thus is a moderate long-term effect.

Metcalf Park and Coyote Creek Trail

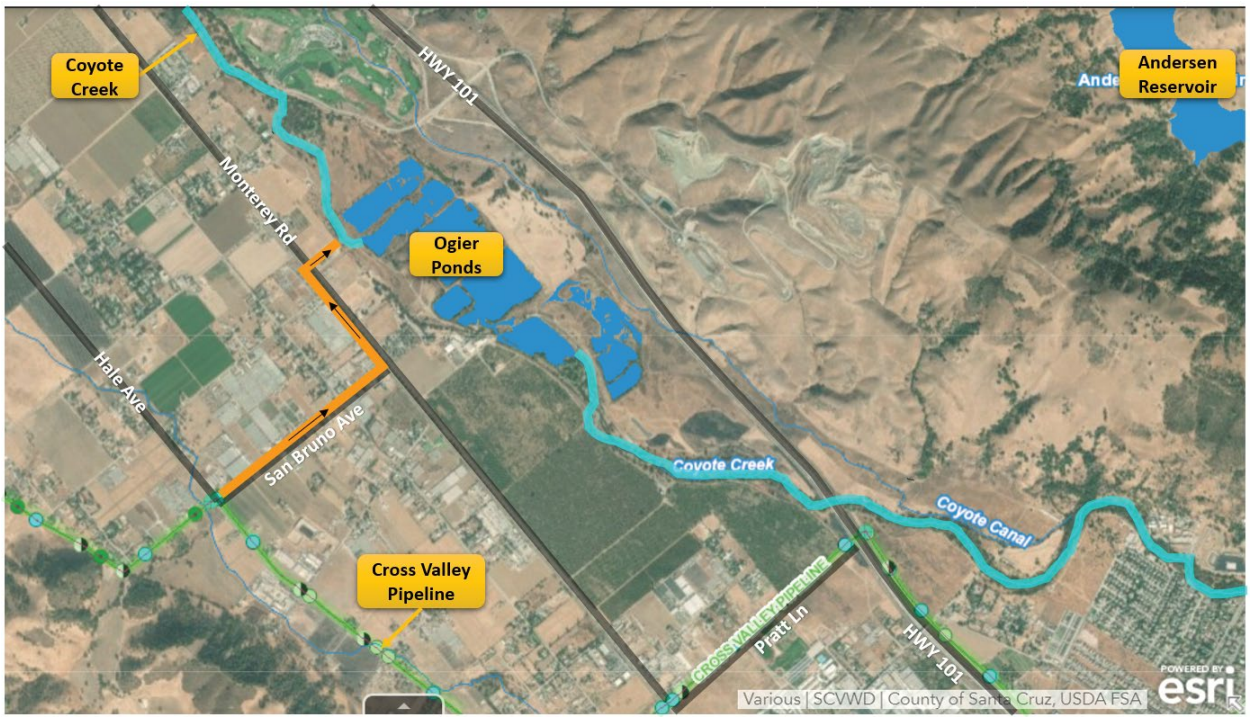
Visitors to Metcalf Park and those using the segment of the Coyote Creek Trail which passes through the park are likely to be affected during the five-month construction period for installation of the Coyote percolation bladder dam. Portions of the park may need to be closed and a segment of the trail rerouted in order to protect public safety. Noise from construction equipment will likely detract from recreation experiences. These effects are considered minimal, short-term adverse effects to recreation resources.

Coyote Creek Parkway

Recreationists using the natural surface spur of the Coyote Creek Trail designated for equestrians are likely to be affected during construction of the energy dissipation structure and slope protection cascade zone for the outlet of the CVP extension (depicted in orange on Figure 11). The presence of construction equipment and the noise associated with it, directly across the creek from the equestrian trail, may startle the horses and detract from the outdoor recreation experience for riders. A portion of the equestrian trail may need to be temporarily closed or rerouted to protect public safety. Downstream of the outlet for the CVP extension, the main Coyote Creek Trail bridges the

creek close enough for trail users to see and hear construction activity, thus the experience for people using the paved portion of the trail may also be negatively affected. Anglers and walkers visiting Ogier Ponds may also have a diminished experience due to construction activity at the site. These diminished experiences are considered minimal, short-term adverse effects to recreation resources.

Figure 11: Cross Valley Pipeline Extension Route (Source: Horizon Water and Environment, 2020).



Coyote Creek Flood Management Measures

Kelley, William Street, Selma Olinder, and Watson Parks

Higher flows in this reach of Coyote Creek from the operation of the low-level outlet are expected to periodically inundate portions of the park near Happy Hollow Zoo and the disc golf course of Kelly Park. While the depth of water expected and the degree to which any developed facilities may be affected is unknown, these are anticipated to be minimal, short-term adverse effects on recreation resources because disc golf baskets are relatively inexpensive and easy to replace and the effected lands within the zoo are undeveloped.

To protect neighboring homes, a floodwall will be constructed from 16th Street to Coyote Creek and behind two homes adjacent to William Street Park. Upon completion of this measure, higher flows in this reach of Coyote Creek from the operation of the low-level outlet are expected to periodically inundate predominantly undeveloped open space

within the park. Due to the undeveloped nature of the park, periodic flooding is expected to be a minimal, short-term adverse effect on recreation resources.

Higher flows in this reach of Coyote Creek from the operation of the low-level outlet are expected to periodically inundate the majority of Selma Olinder Park facilities, including the Coyote Creek Trail. Due to the developed nature of this park and the lack of access to most of the recreation facilities during high flow events, this is considered a moderate, short-term adverse effect on recreation resources.

Higher flows in this reach of Coyote Creek from the operation of the low-level outlet are expected to periodically inundate over 50% of Watson Park, including the multipurpose ball fields, a restroom, both dog parks (including picnic table and benches), the two largest parking areas, paved walking paths, and natural surface trails. Due to the developed nature of this park and the lack of access to most of the recreation facilities during high flow events, this is considered a moderate short-term adverse effect on recreation resources.

In the October 1 EA, Commission staff recommended Valley Water implement the recreation related avoidance and minimization measure (AMM REC-1), to provide advance notice of limited access or closure of recreation facilities. Information regarding alternative locations to pursue outdoor recreation must be provided for all user groups, including but not limited to: anglers, motorized boaters, non-motorized boaters, hikers, wildlife watchers, and picnickers. Continued implementation of this measure during construction and operation of the low-level outlet, development of the CVP extension, replacement of the Coyote percolation dam, and implementation of Coyote Creek flood management measures will serve to mitigate some of the adverse effects on recreation resources.

In an October 30, 2020 filing, Santa Clara County Parks voiced concern that recreation facilities within the Coyote Creek corridor would be flooded temporarily or permanently and that ongoing environmental monitoring could damage the Coyote Creek Trail or create a hazard for users. The installation of a new low-level outlet is part of the larger seismic retrofit project which has been undertaken to address the seismic instability of Anderson Dam. The new low-level outlet will enhance Valley Water's ability to pass water through the dam during and after reconstruction. The Coyote Creek flood management measures being analyzed in this Supplemental EA are being implemented to reduce the effect of anticipated periodic high flows which will likely exceed the existing channel capacity of Coyote Creek. While permanent flooding of recreation facilities is not expected under the planned operating regime, occasional flooding due to unusual rain events may occur. Should any recreation facilities be damaged due to flooding, Santa Clara County Parks and Valley Water would have to collaborate to address the issue. Valley Water will also have to work with the City of San Jose to address inundation related affects to recreation facilities located at city parks within the Coyote Creek

corridor. Similarly, Valley Water should consult with Santa Clara County Parks regarding use of the Coyote Creek Trail to gain access for environmental monitoring purposes and take steps to ensure the safety of trail users.

3.2.8 Land Use

The October 1 EA analyzed the effects of the proposed actions associated with the drawdown. Commission staff concluded that the prolonged reservoir drawdown will have limited effect on land uses within the project area. Additionally, Valley Water was directed to consult with the California Department of Forestry and Fire Protection (CalFire) regarding the need for additional measures to ensure that the reservoir could serve as a water source for fighting wildfires, if needed, at deadpool.

Some components of the FOCP will affect lands downstream of Anderson Dam which were not fully evaluated in the October 1 EA. Low-level outlet construction, creek channel and bank erosion control, and reopening of the historical Coyote Creek channel will all occur within the footprint of Anderson Reservoir, Anderson Dam, and the area at the foot of the dam along Coyote Creek. These components of the FOCP are within lands designated for Regional Parks, Agriculture, and Hillsides in the Santa Clara County General Plan (Santa Clara County 1994), Open Space, Public Facilities, and Rural County in the City of Morgan Hill General Plan (City of Morgan Hill 2016), and Open Hillside in the City of San Jose General Plan (City of San Jose 2011). These lands are owned by Valley Water, Santa Clara County, the City of San Jose, or private parties.

Installing the CVP extension and constructing the Coyote Creek flood management measures will occur several miles downstream of Anderson Dam. The land use designations and land ownership for these components of the FOCP are detailed below in the order they occur proceeding downstream from Anderson Dam.

3.2.8.1 Affected Environment

Cross Valley Pipeline Extension

The CVP extension will be installed within existing road rights-of-way for the majority of its length (Horizon Water and Environment. 2020), which is consistent with the existing land use designation. The segment linking the pipeline from the Monterey Road right-of-way to Coyote Creek will be installed just downstream of the Ogier Ponds outlet on lands owned by Santa Clara County.

Coyote Creek Flood Management Measures

The flood management measures will be implemented within the City of San Jose and will affect many private properties, primarily used for residential and industrial purposes, as well as public lands used for parks and open space. Unless otherwise noted, the flood management structures will be built on lands designated as Open Space, Parklands and Habitat in San Jose's General Plan. Valley Water's proposed measures below are discussed in the order they occur proceeding downstream from Interstate 280 to the South Bay Mobile Home Park.

1. Construct a 4-foot-tall floodwall 400 ft along the backyard perimeter of two residential properties located at the southern end of William Street Park.
2. Acquire or elevate a residential property located on East William Street.
3. Construct a 9-foot-tall floodwall 700 ft along the western edge of the Coyote Outdoor Classroom to protect residential properties facing East William Street and South 16th Street from periodic high flows.
4. Acquire or elevate a residential property located on South 17th Street between San Carlos Street and San Salvador Street.
5. Acquire or elevate four residential properties located on the east side of Arroyo Way.
6. Construct a 5.5-foot-tall floodwall 550 ft along the west bank of Coyote Creek behind two residential properties located on South 17th Street.
7. Acquire or elevate three residential properties located on South 17th Street between Santa Clara Street and San Fernando Street.
8. Construct a 6-foot-tall floodwall 1,200 ft along the west bank of Coyote Creek between Mabury Road and Highway 101 to protect adjacent Light Industrial lands.
9. Construct a 9-foot-tall floodwall 2,500 ft from Mabury Road to Berryessa Road on the west bank of Coyote Creek to protect adjacent Heavy Industrial lands.
10. Construct a 9-foot-tall floodwall 2,000 ft downstream of Berryessa Road on the west bank of Coyote Creek to provide additional protection for Heavy Industrial lands.
11. Extend an existing levee at the terminus of the floodwall along the west bank downstream of Berryessa Road 350 ft to protect a mobile home park located on Residential Neighborhood lands.
12. Construct a 350-foot-long floodwall on the east bank of Coyote Creek adjacent to Notting Hill Drive to protect residential structures located across the street on Residential Neighborhood lands.

3.2.8.2 Environmental Effects

Construction of the low-level outlet, installation of the CVP extension, implementation of Coyote Creek flood management measures, and ongoing operations of the low-level outlet will affect land use during construction and through periodic inundation of private and public lands.

Cross Valley Pipeline Extension

Development of the CVP extension will result in short-term, minor adverse effects to individuals and businesses located adjacent to the road rights-of-way used to install the pipeline during construction. The final segment of the pipeline and the outlet works will be placed on land owned by Santa Clara County. Construction of the outlet works will modify the landscape from naturalized open space to a built environment. The adverse effect to land use is expected to be minor and short term since the structure will be installed adjacent to a section of Coyote Creek that was previously modified during the development of the Ogier Ponds and vegetation will be planted to help the structure blend into the open space.

Coyote Creek Flood Management Measures

Installation of Coyote Creek flood management measures will result in short-term and long-term minor and moderate adverse effects. It is unclear how periodic flooding will affect recreation facilities at Watson Park, Selma Olinder Park and Olinder Elementary School. The depth of the water, the amount of debris deposited onto park facilities, and the length of inundation are a few of the factors which will influence the severity of adverse effects. Any adverse effects which result from periodic flooding of Kelley Park and William Street Park are expected to be minor and short-term due to the predominately undeveloped nature of the areas expected to be inundated. No adverse effects are anticipated at Empire Gardens Elementary School adjacent to Watson Park because the school lands and structures are outside of the inundation zone. Short-term, minor adverse effects, such as noise and traffic associated with construction equipment, are expected for residential lands near the sites where flood management measures will be installed. The introduction of flood management measures into parks, especially in high-visibility areas of the park, will have long-term adverse effects due to repeated inundations.

Valley Water identified nine parcels located in low lying areas which contain structures that will be partially inundated during high flow events, thus the land use may change if the structures cannot be modified for continued residential use. Valley Water plans to work with property owners to determine whether to elevate or acquire each property, taking into consideration the feasibility and costs associated with buying or

elevating each home. Home elevation would involve lifting the house above the specified flood water surface elevation.

In separate filings Mr. Ruder (August 17, 2020), Mr. Smith (October 30, 2020), and Mr. Fioretta (December 11, 2020) expressed doubt regarding the need for elevating or acquiring structures. Mr. Ruder and Mr. Fioretta advocate for Valley Water to establish a fund for repairing properties subsequent to a flooding event which damaged homes rather than acquiring or elevating properties. This proposal has a degree of uncertainty for Valley Water regarding the properties in question rather than providing a conclusive solution. Commission staff does not have enough information to evaluate the merits of this proposal, thus it will be Valley Water's responsibility to assess this alternative. No details were provided regarding the long-term management of acquired properties, but Valley Water noted that additional environmental review may be required should it propose future physical alterations to the acquired properties, such as demolition of structures. Therefore, the environmental effects associated with acquired or elevated structures cannot be determined at this time.

Valley Water noted that unhoused individuals may be occupying areas in close proximity to Coyote Creek (Horizon Water and Environment 2020). Such occupation may occur at any point along the creek, but is more likely to occur in the parks located in the more densely populated reach through the City of San Jose. In order to avoid potential harm to unhoused individuals, efforts should be made to notify any unhoused occupants to vacate the area prior to implementing the downstream flood management measures. However, as discussed in *Supplemental EA Section 2.2.3*, the Commission can only enforce those actions that serve project purposes and are within our jurisdiction.

3.2.9 Cultural Resources

The October 1 EA analyzed the environmental effects of the proposed actions associated with the reservoir drawdown to historic properties and cultural resources. *October 1 EA Section 3.3.9 Cultural Resources* determined that the Undertaking[43] is more specifically defined by the following major activities: (1) the lowering of Anderson Reservoir and the (2) the construction of the low-level outlet.

The APE for the Undertaking is the entirety of Anderson Reservoir (to ordinary high water mark, elevation 627.9 feet), areas within 500 feet of ground disturbing activities, and lands outside of the project boundary where activities related to the Undertaking may cause changes in the character or use of historic properties, if historic

[43] An undertaking means a project, activity, or program funded in whole or part under the direct or indirect jurisdiction of a federal agency, including, among other things, processes requiring a federal permit, license, or approval.

properties exist. As we discussed in the October 1 EA, the area affected by the drawdown of the Anderson Reservoir and construction of the low-level outlet has not been surveyed or evaluated adequately enough to determine if there are archaeological or cultural resources eligible for the National Register. In the October 1 EA, Commission staff recommended that Valley Water implement the PA and it was incorporated in ordering paragraph (C) of the October 1 Order.

3.2.9.1 Affected Environment

The *October 1 EA Section 3.3.9.1* addressed the Anderson Dam, reservoir, and the geographic area's cultural history and studies that have been conducted to date. As discussed in the October 1 EA, to investigate the possible effects due to the reservoir drawdown and tunnel construction, Valley Water conducted archaeological inventories in 2013, 2014, 2017, and from 2019-2020. In 2019, a reservoir rim survey was conducted from the high-water level of 578 ft above mean sea level to the reservoir's maximum operation elevation of 627.9 ft and included: (1) intensive pedestrian surveys; (2) mixed-strategy surveys; (3) and minor scraping or subsurface tests. No survey was conducted in inaccessible areas. No survey has been conducted for portions of the APE below 578 ft elevation in the reservoir. Field efforts in 2019 also included subsurface identification in areas of the APE downstream of the dam outlet consisting of backhoe trenching on Santa Clara County Parks, Valley Water, and privately-owned properties.

Valley Water evaluated the Anderson Dam, built in 1950, for eligibility for listing on the National Register in a 2006 report, which was subsequently updated in 2019. The report determined that the dam, and appurtenant buildings and structures does not meet the criteria for listing in the National Register as an individual resource, or as part of a historic district. On January 29, 2020, the California SHPO provided concurrence with this finding.

Valley Water has not conducted any background investigations or archaeological investigations for areas downstream including areas around the CVP extension, Coyote percolation dam, and Coyote flood management measures. On December 14, 2020, Valley Water provided a map refining the areas described in their draft proposed work plan. Below, we analyze the effects on cultural resources and historic properties as result of the low-level outlet tunnel construction, Coyote percolation dam replacement, and implementation of Coyote Creek flood management measures.

Anderson Dam Tunnel Construction

Construction of the low level outlet including tunneling, staging, modifying Coyote Creek channel, installing tunnel facilities, and stockpiling and accessing related supporting activities will adversely affect archaeological resources. Pedestrian surveys and subsurface testing did not uncover evidence of archaeological materials within the

proposed work associated with the Anderson Dam tunnel construction. Valley Water's December 14, 2020 draft work plan includes information regarding consultation, outreach, reporting, and preparing a finding of effect for known historic resources regarding tunnel construction areas. While Valley Water does not anticipate any new discoveries as part of its construction of the low-level outlet, if there are any unanticipated discoveries, Valley Water will cease all work and address the discovery or unanticipated effect pursuant to the PA.

Valley Water's identification of effects found three archaeological sites and it says it will assume all three sites are eligible for the National Register; however, they are not in the project area and avoidance and minimization measures can be proposed as necessary. Valley Water's identification efforts also revealed five man-made structures, features, or facilities in the APE near tunnel construction areas. Valley Water states the property at 2290 Cochrane Road is the only historic property previously determined eligible for listing in the National Register. The property at 2290 Cochrane Road is a complex of buildings built between 1863-1945, including residences and agricultural outbuildings on a 12.27-acre parcel currently known as the Giancola property (historically during different periods referred to as the Rhoades Ranch, Phegley Home Ranch, and Strawberry Institute of California). The property was surveyed and evaluated in 2010 and found to be eligible for listing in the National Register. On April 7, 2013, the Rhoades Ranch property was listed on the National Register. The contributors to this historic property include: the Phegley house, garage, horse barn, water tower, Rhoades house, equipment building, and office. Non-contributors are the Stucco house and the Board and Batten houses. The character-defining features of the historic district are the architecture and design of the buildings and structures, along with its agricultural and natural setting. Also, within this area are pre-contact and historic area archaeological components, which includes a surface scatter of pre-contact artifacts. This property will be used as contractor offices and parking for workers.

In 2019, Valley Water conducted a pedestrian survey and excavated three backhoe trenches where the potential project footprint overlaps with previous site boundaries of the Phegley house and Rhodes Ranch historic district and did not identify archaeological materials. Although, intact components of the pre-contact components and historic-era artifacts may be present in the western portion of the site boundary, they do not appear to be present within proposed disturbance areas.

Valley Water also evaluated the property at 2390 Cochrane Road, also known as the Coyle property, which is a single-family residence built in 1951. In 2014, Valley Water evaluated this property for National Register eligibility and determined that it was not eligible for listing in the National Register as an individual property, nor as a contributor of the adjacent Rhoades Ranch Historic District at 2290 Cochrane Road. Valley Water's December 14, 2020 draft work plan notes that it will update recordation of the Coyle property and field check National Register-listed Rhodes Ranch to assess

whether the property retains historic integrity. Once these actions are complete, Valley Water intends to submit evaluations to the California SHPO for review and concurrence. This residence will be used as a project office and the southern part of the parcel for additional contractor offices and parking during tunnel construction.

In a 2018 report, Valley Water evaluated a centrifugal type irrigation pump and associated equipment constructed in the early 1900s located on a 4.61-acre parcel owned by Valley Water adjacent to Cochrane Road, once part of Rancho Laguna Seca. Valley Water found it not eligible for the National Register. Valley Water has also not sent this assessment to California SHPO for concurrence; however, the December 14, 2020 draft work plan noted Valley Water plans to submit evaluations for the irrigation pump and water distribution pipe to the California SHPO for review and concurrence. Valley Water also examined the East Dunne Avenue Bridge over Coyote Creek at the southeast end of Anderson Reservoir; however, since it was constructed in 1987, it is not old enough to be considered historic.

Cross Valley Pipeline Extension

The CVP extension will be installed within existing road rights-of-way for much of its length. In its December 14, 2020 draft work plan, Valley Water states that the CVP extension component is geographically separate from the area previously studied and surveyed. Therefore, Valley Water intends to conduct the following: (1) background research; (2) consultation and outreach; (2) pedestrian survey of archaeological resources and subsurface identification, if warranted; (3) if cultural resources are identified, evaluation for listing on the National Register; (4) if historic properties are identified, preparation of finding of effects; and (5) if adverse effects are identified, preparation of resolution of effects. To date, Commission staff is unable to determine if any cultural resources or historic properties would be affected by the proposal to extend the CVP pipeline because no studies have been completed.

Coyote Creek Flood Management Measures

The Coyote Creek flood management measures will be implemented within the City of San Jose and will impact private properties, primarily used for residential and industrial purposes. They include the following actions: raising a section of levee (approximately 350 linear feet); installing new floodwalls (approximately 7,700 linear feet); and elevating or acquiring low-lying properties.

On November 20, 2020, Don Lieberman filed information with the Commission relaying that he is a homeowner who would be impacted by the Coyote Creek flood management measures because Valley Water is determining whether to elevate or acquire his property. Mr. Lieberman raised concerns that either proposal to demolish or elevate his property would eliminate its value as a historic resource. Mr. Lieberman's property

located at 120 Arroyo Way has historic interest as it was listed in the National Register on September 23, 2010.[44] This property previously belonged to Ernest and Emily Renzel and was listed in the National Register under the following areas of significance: politics/government -- as Ernest Renzel was an important figure in San Jose political history; and architecture -- because it is a distinctive early example of Ranch style architecture. Renzel became a member of the San Jose City Council during an important period of transition in city government and was recognized as the main advocate for the creation of a municipal airport. Chester Root, a well-established Modernist architect working in the Bay Area, designed the building which integrated traditional and modern materials to fit the rustic setting of the property. The property is located downstream of the Anderson Dam along Coyote Creek in an area that is a part of the CCFPP.

Coyote Percolation Dam Replacement

The existing Coyote percolation dam was constructed in 1937 by Santa Clara Valley Conservation District and is a steel panel flashboard dam installed on a concrete apron to create an in-stream percolation reservoir. Valley water proposes to replace the existing flashboard dam with a temporary 112-foot long by 10-foot high inflatable bladder dam. Valley Water would also install new fish ladder panels to improve fish passage. Portions of the existing Coyote percolation dam would be demolished or modified to construct and install the new bladder dam and fish ladder panels. According to the December 14, 2020 draft work plan, Valley Water plans to prepare an updated inventory and evaluation of the Coyote Percolation Dam for National Register eligibility.

Additional archaeological investigations are necessary to determine the presence or absence of historic properties and to determine the effects to cultural resources in the area of the Coyote percolation dam. The Commission, in consultation with the California SHPO, developed a PA, which stipulates that Valley Water: (1) conduct surveys of the reservoir area during and following the drawdown; (2) evaluate of identified archaeological resources for National Register eligibility; and (3) assess the effects of the undertaking on any historic resources.[45] The PA was developed for the

[44] https://catalog.archives.gov/id/123861772 (accessed on December 6, 2020).

[45] By letter dated March 30, 2020, the Advisory Council stated its participation in the consultation was not needed to resolve adverse effects. Also, there are no federally-recognized Tribes that may have interests in the project area, but Valley Water and the Commission have consulted with the following local Tribes recognized by the Native American Heritage Commission: Amaah Mutsun Tribal Band, Amah Mutsun Band of Mission San Juan Bautista, North Valley Yokuts Tribe, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Ohlone Indian Tribe, and Indian Canyon Mutsun Band of Costanoan.

entire FOCP proposed action and for areas within our jurisdiction. The PA was executed between the Commission and the California SHPO by signature on September 4, 2020 and September 9, 2020, respectively. The Corps and Valley Water concurred. The October 1 Order requires Valley Water to implement the PA.

3.2.9.2 Environmental Effects

The proposed project has the potential to adversely affect the historic property at 2290 Cochrane Road and the Rhoades Ranch Historic District due to the usage of a portion of the property in the southeast corner of the parcel for staging activities. This area, known in the project plans as Staging Area 2, will be used for contractor offices and worker parking. Staging has the potential to temporarily diminish the historic district's integrity of setting, feeling, and association by altering the physical characteristics of the historic property's agricultural and natural setting.

Commission staff finds that Valley Water needs to update or submit a complete evaluation of the historic properties and archaeological resources in the tunnel construction area to the California SHPO for review. In addition, Valley Water must complete surveys to assess what cultural resources and historic properties may be affected by the CVP extension. However, the approved PA, which requires Valley Water to gather information through survey work and complete analyses and assessments, will provide this information so we can better understand the effects to cultural resources and historic properties within our jurisdiction. The PA also provides a mechanism for mitigation measures to be developed if Valley Water's proposal adversely affects cultural resources or historic properties, as well as for amending the PA, as necessary.

On December 14, 2020, Valley Water filed a draft work plan for cultural resources studies pursuant to stipulation I(A) of the project's approved PA with the Commission, the California SHPO, and Corps for a 30-day review and comment period. Valley Water proposes to prepare a report that assembles previously prepared documentation for resources within the APE and complete the following actions: (1) submit evaluations for the irrigation pump and water distribution pipe for California SHPO concurrence; (2) update recordation of Coyle property conducted more than five years ago and submit for California SHPO concurrence; (3) field check National Register-listed Rhodes Ranch to determine whether the property retains historic integrity and submit findings of effect to the California SHPO for review and concurrence. In addition, Valley Water's draft work plan discusses their strategy to complete studies, evaluate resources, submit findings of effect to the Commission, California SHPO, and the Corps. We recommend that Valley Water submit the evaluations and findings of effects pursuant to the stipulations of the approved PA. In our review of the draft work plan, we will determine if it incorporates the provisions of the PA for activities within the Commission's jurisdiction. In addition, any modifications to the draft work plan filed for Commission approval will be addressed in a separate Commission order.

In Commission staff's review, it is not clear if the project would adversely affect the Coyote percolation dam, the 120 Arroyo Way property, or Coyote Creek flood management measures. There is limited information on how Valley Water's proposal will affect cultural resources in these areas. In the December 14, 2020 draft work plan, Valley Water proposes to complete an analysis of the Coyote percolation dam, and conduct analysis and assessments for the Coyote Creek flood management measures. While we recommend that Valley Water survey and evaluate these areas for cultural resources, as discussed in *Supplemental EA Section 2.2.3*, the Commission can only enforce those actions that serve project purposes and are within our jurisdiction.

The PA, as approved in the October 1 Order, provides stipulations for, in part, the following: competition of surveys and outstanding investigations by developing a work plan reporting; findings of effect, emergency situations; preparing a finding of effect; modification of area of potential effect; post-review discoveries and inadvertent discoveries; and emergency situations. These provisions are discussed, in part, further below

The PA stipulates that Valley Water will complete the initial, on-going pedestrian surveys, then develop a work plan detailing the scope of work for archaeological resources investigations before and during the Undertaking. The work plan will discuss plans to survey the reservoir, survey methods, and any analysis. As part of its archaeological investigations, Valley Water will formally evaluate sites for the National Register. Unevaluated sites will be assumed to be eligible for listing in the National Register. If traditional cultural properties (TCP) are discovered, Valley Water must take inventory of any TCPs in accordance with guidance provided in the National Register Bulletin No. 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties (Parker and King, 1990).

If Valley Water determines the Undertaking will affect a previously unidentified cultural resource or will affect a known historic property in an unanticipated manner or have a greater adverse effect on a known historic property than previously anticipated, Valley Water will cease all work and address the discovery or unanticipated effect. Should an emergency situation occur which represents an imminent threat to public health or safety, or creates a hazardous condition, Valley Water would inform the Commission and will immediately notify the California SHPO and take measures to respond to the emergency or hazardous condition. At the end of every quarter following the execution of the PA, Valley Water will provide a summary report to all the signatory and concurring parties to the PA detailing work carried out pursuant to its terms. These reports will describe progress made implementing the terms of the PA, including: any disputes and objections received and the resolution and information detailing the use of the PA.

Commission staff required Valley Water to implement the stipulations of the PA through the October 1 Order and will ensure the measures are carried out. The provisions of the PA will mitigate for any adverse effects to cultural resources, within the areas under Commission's jurisdiction, that may result from Valley Water's implementation of the proposed action.

3.2.10 Aesthetic Resources

The *Oct 1 EA Section 3.3.10.2 Environmental Effects* focused on how lowering the reservoir pool in Anderson Reservoir would affect aesthetics within the viewshed of Anderson Dam County Park. In order to mitigate long-term aesthetic effects associated with lowering the reservoir pool, we recommended that Valley Water design the reservoir bank and stability improvement measures to blend with the environment using local stone or other materials, native plants, for revegetation or vegetative screening, or natural tones for painted surfaces. This supplemental EA focuses on how construction and operation of the low-level outlet, development of the CVP extension, installation of chillers, replacement of the Coyote percolation dam, and implementation of Coyote Creek flood management measures will affect aesthetic resources for nearby residents and park visitors.

3.2.10.1 Affected Environment

In addition to the aesthetic effects associated with the drawdown to deadpool, Valley Water's proposed avoidance and minimization measures (Horizon Water and Environment. 2020) are also likely to result in aesthetic effects.

<u>Live Oak Day Use Area</u>

The Live Oak Day Use Area is located at the base of Anderson Dam and will be highly modified by construction activities associated with development of the low-level outlet, implementation of creek channel and bank erosion control measures, installation of chillers, and reopening of the historical northern channel of Coyote Creek. A portion of the remaining Live Oak Day Use Area, including the Live Oak Group Picnic Area will become an island between the north and south channels of Coyote Creek once the north channel is reopened. Additionally, several single-family picnic sites and the Serpentine Trail will be eliminated.

Chillers

Valley water plans to install four chillers (each approximately 12-foot-wide by 32-foot-long by 13-foot-high) approximately 1,200 ft downstream of Anderson Dam at the existing hydropower generating facility along Cochrane Road. These lands are owned by Valley Water and are zoned Public Facilities within the City of Morgan Hill's land use plan.

Cross Valley Pipeline Extension

The CVP extension will be installed within existing road rights-of-way for the majority of its length (Horizon Water and Environment. 2020). The segment linking the pipeline from the Monterey Road right-of-way to Coyote Creek will be installed just downstream of the Ogier Ponds outlet on lands owned by Santa Clara County.

Coyote Percolation Dam Replacement

Valley Water will replace the Coyote percolation dam with an inflatable rubber dam to allow for more rapid management of the percolation pond as compared to the current flashboard dam. To accommodate construction, Valley Water will install a temporary cofferdam to isolate the existing dam and fish ladder, dewater a section of Coyote Percolation Pond, and divert flow around the area. The pond is adjacent to Metcalf Park which separates the pond from a residential neighborhood.

Coyote Creek Flood Management Measures

Due to higher capacity to pass water via the new low-level outlet, periodic flood events are anticipated to occur on a two to three-year cycle. In order to mitigate the effects of these events, the Coyote Creek flood management measures have been developed to avoid and minimize downstream flooding within urbanized areas of Coyote Creek anticipated to result from potential maximum releases through the new outlet by helping keep flows within parks and open spaces to protect residential properties. The flood management measures analyzed in this Supplemental EA include constructing seven floodwalls, extending an existing levee, and elevating or acquiring nine structures located on eight private properties.

3.2.10.2 Environmental Effects

The FOCP features will result in visible permanent changes at the site's new outlet structures, new weirs, reopened northern channel, and access road reconfigurations. However, these features will be located within previously disturbed areas. It is anticipated that upon completion, views of the overall project site will be not be substantially affected.

Live Oak Day Use Area

Visual resources at the Live Oak Day Use Area will be affected due to the amount of change that will occur within a relatively small footprint. Substantially modified features, such as removal of large oak trees and other established vegetation, modifying access roads, and opening the north channel, will result in permanent changes to the visual character and quality of the recreation site. Once the security fences are removed, new vegetation is established, and the signs of recent construction diminish, the overall visual quality of the site is expected to return to a visual character and quality similar to the existing state, absent the large woody vegetation. Strategically placed vegetative screening would help soften the affect associated with the development of these new structures. Park visitors may also experience elevated noise levels during operation of the chiller units across Cochrane Road from thissite. Due to the multi-year time period associated with construction of the low-level outlet, the number and scope of permanent features installed, and the loss of mature tree cover, aesthetic resources will be moderately adversely affected for park visitors and nearby residents.

Chiller Installation

The four chiller units will be installed on a narrow parcel, owned by Valley Water, located between two residential housing developments. Due to their size, they will likely be visible in the adjacent residential neighborhoods, as well as from Cochrane Road and Alicante Drive. Construction of these units will result in short-term, minor adverse effects to individuals residing nearby. Aesthetics associated with installation and ongoing operation of the chillers may result in long-term, minor to moderate adverse effects to nearby residents as well as visitors to the Live Oak Day Use Area, dependent upon any vegetative screening and noise abatement measures adopted by Valley Water to mitigate such effects.

Cross Valley Pipeline Extension

The energy dissipation structure and slope protection cascade zone for the outlet of the CVP extension is likely to affect the aesthetic view for recreationists from the nearby Coyote Creek Trail bridge as well as for equestrians using the spur trail which passes close to the outlet site. The recreation experience for anglers using the area of Ogier Ponds located closest to the construction site will also be diminished due to construction activity. During construction, the presence of construction equipment and noise associated with construction activity will result in a moderate short-term adverse effect for recreationists. An ongoing minor adverse effect may be experienced by regular trail users.

Coyote Percolation Dam replacement

Construction activities associated with installation of a bladder dam will result in aesthetic effects for nearby residents and park visitors. Vegetative clearing and construction traffic will affect the viewshed and soundscape for residents of nearby homes as well as for individuals using park facilities. The separation provided by Metcalf Park will attenuate the effects for nearby residents. These aesthetic effects are expected to be short-term, minor adverse effects.

Coyote Creek Flood Management Measures

Construction activities associated with the installation of floodwalls, a levee, and elevation or acquisition of nine structures will influence the aesthetic character of Coyote Creek. The flood management measures will be implemented along the mid-Coyote Creek in San Jose, between Highway 280 and Oakland Road. Floodwalls are proposed in several sections, which will vary in height from 2 to 9 ft tall and most likely be constructed with steel sheet piles. An existing trapezoidal-shaped levee will also be extended to protect areas from flooding along Coyote Creek.

The majority of the floodwalls will be constructed on the west bank of Coyote Creek, as specified in the *Supplemental EA Section 3.2.8.1 Affected Environment*. The levee will be extended upstream to provide additional flood protection for the mobile home park. A single floodwall will be built on the east bank of Coyote Creek along Notting Hill Drive across the street from residential properties. Constructing the floodwalls will result in permanent changes to the visual character and quality of the view from neighboring parks and private properties. Depending upon the height and location of the wall relative to the viewshed from each property, the effect to aesthetic resources will be minor to moderate.

Valley Water proposes to acquire or elevate several structures as specified in the *Supplemental EA Section 3.2.8.1 Affected Environment*. Elevating homes would permanently modify the aesthetics of the structures as well as the aesthetics of the neighborhood and the Coyote Creek corridor. The severity of the influence on aesthetic resources is anticipated to be minor to moderate depending upon how well the modified structures blend into the surrounding neighborhood. No information was provided regarding the long-term disposition of any acquired properties (i.e., elevated and resold or razed and planted with native vegetation), thus any aesthetic effects cannot be analyzed.

Commission staff anticipates that ongoing consultation with resource agencies, affected property owners, members of the pubic, and other stakeholders will result in additional clarification regarding design elements of proposed avoidance and minimization measures which may partially mitigate aesthetic effects. However, as

discussed in *Section 2.2.3 of the Supplemental EA*, the Commission can only enforce those actions that serve project purposes and are within our jurisdiction.

3.2.11 Transportation

3.2.11.1 Affected Environment

The affected transportation environment near Anderson dam is described in the October 1 EA. However, the locations of the Coyote percolation pond and the Coyote Creek flood management measures are discussed below.

The Coyote percolation dam is located adjacent to Metcalf Park which itself is adjacent to a residential neighborhood. Access to the dam site from U.S. Highway 101 is available via the Bailey Avenue interchange which allows access to Monterey Road approximately 2.6 miles southeast of the dam site. Between Bailey Avenue and the dam, Monterey Road is a four-lane divided highway passing through an area of light industry and agriculture. Metcalf Road intersects Monterey Road at the head of the percolation pond via a three-way signaled intersection. Metcalf Road quickly meets a gravel road approximately 1 mile in length that continues around the east side of the pond and allows access to the right side of the dam. This road includes an approximately 0.9-acre gravel laydown area at its midpoint. Access to the left side of the dam is provided from Monterey Road via a three-way signaled intersection with Menard Drive, which then meets Forsum Drive. A short gravel access road connects Forsum Drive with the dam. From Monterey Road, this route is approximately 0.25 mile long and runs through a residential neighborhood, along the edge of Metcalf Park, and crosses the Coyote Creek recreation trail.

The location of the Coyote Creek flood management measures is within an urban environment, and would generally affect two locations. The northern area along Coyote Creek is located near Berryessa Road, approximately 0.5 miles east of where it meets U.S. Highway 101 at a diamond interchange. From Berryessa Road, access to the left creek bank is available through various commercial and industrial properties. Access to the small area on the right side of the creek along Notting Hill Drive is available via an approximately 0.4-mile-long route off of Berryessa Road, a portion of which travels through a residential area.

The southern area affected by the proposed flood management measures is accessible from 16th and 17th streets. Both of these thoroughfares cross Santa Clara Street approximately 0.8 miles west of where it meets U.S. Highway 101. From 16th and 17th streets, the creek is accessible through private residential properties.

3.2.11.2 Environmental Effects

Proposed activities related to ADTP construction will primarily consist of preparation of staging areas, construction of the outlet tunnel, and modification of Coyote Creek stream channels. Activities are expected to occur over a 20-month period beginning in early 2021 with completion at the end of 2023. Cochrane Road and Dunne Avenue are potential routes to be used by trucks between U.S. Highway 101 and the project site. However, most project traffic will utilize Cochrane Road.

Spoils produced by construction activities would be stockpiled onsite, resulting in truck trips that will deliver and remove equipment to and from the site, but will not result in the transportation of excavated material off the construction site. These truck trips will not be expected to occur daily. Rather, one will be made to deliver equipment at the beginning of a construction phase and another will occur to remove the equipment at the end of the phase. Trucks will be routed west on Cochrane Road to access U.S. Highway 101.

It is anticipated that an average of approximately 13 large trucks will access the site daily to deliver materials and equipment. However, depending on the ultimate scheduling of each of the construction phases and activities, the project could generate up to 38 truck trips per day, 19 in and 19 out, at any one time on the roadway network assuming a worst-case scenario in which all equipment deliveries were to occur on the same day for any particular construction phase. Furthermore, a small number of truck trips comprising oversized loads will be required, but will be infrequent when compared to daily truck traffic. Delivery of large equipment or short-term alterations of site access may require temporary lane closures on Cochrane Road. Such closures will occur only during the day and may last for 10 working days.

Auto trips will be generated daily by workers and staff. Workers will utilize Cochrane Road to U.S. Highway 101 or other roadways south of the site to access Dunne Avenue to U.S. Highway 101. These trips will mainly represent worker trips to and from the site throughout their work shifts. A maximum of approximately 100 employees per daytime work shift, including supervisors and office staff, will be expected on site at any one time. During the construction period, workers will be split into 10 or 12-hour work shifts over a 24-hour workday. Work shifts will primarily be comprised of a day shift from 7:00 a.m. to 5:00 or 7:00 p.m., and an evening shift from 7:00 p.m. to 5:00 or 7:00 a.m.

The exemptee estimated daily traffic generated by the project's workers based on work shift information and the assumption that employees will carpool at a rate equivalent to 1.5 employees per vehicle. Based on the assumptions, it is estimated that the proposed project will generate a total of 67 daily auto trips. The project will generate the greatest amount of auto traffic (34 trips) from 6:00 to 7:00 a.m. during the arrival and

5:00 to 6:00 p.m. during the departure of employees for the 7:00 a.m. – 5:00 or 7:00 p.m. work shift.

The project is projected to add a maximum of 105 daily trips (67 auto and 38 trucks) to surrounding roadways. Cochrane Road and Dunne Avenue have been identified as potential routes to be used by trucks between U.S. Highway 101 and the project site. However, most of the project traffic, from both autos and trucks, is expected to utilize Cochrane Road to the west of the project. The utilization of other roadways including Dunne Avenue is expected to be much lower and routes other than Cochrane Road would be only minimally affected by project traffic.

The additional project traffic due to both trucks and workers along Cochrane Road will represent an approximately 1 to 2 percent increase in daily volume. Though the project traffic will result in a minimal increase in traffic along surrounding roadways, the increase will have little effect on roadway operations and will still be well within the roadway capacities.

The busiest intersections in the project vicinity are those located at the U.S. Highway 101 interchange with Cochrane Road. It is not anticipated that the trips caused by the construction activities will result in any substantial operational effects at the interchange as most of the project traffic would be travelling in the off-peak direction. In addition, relative to the existing recreational activities at the project site, the number of trips from the site during the peak hours will be expected to decrease or remain the same.

During work conducted at the Coyote percolation pond, although the route off of Metcalf Road is longer, it allows access to the staging area. Therefore, most equipment and material deliveries will use Monterrey Road, a short segment of Metcalf Road, and the gravel access road around the pond, preventing disruptions to existing traffic within the area. The shorter access route to the dam will likely be used by commuting workers and some deliveries. This traffic will pass through residential and recreational areas. Construction traffic during particular phases may moderately delay residents or park users, but such interruptions will be brief and infrequent.

For levee construction, hauling away excavated material and delivering fill using standard dump trucks will require about 380 round trips. Additional traffic will be produced by the delivery and removal of equipment such as excavators and loaders, and workers. Installation of floodwalls will require the use of vehicles to deliver sheet pile, compact loaders, pile-driving equipment and a crane to raise the sheet pile and lift the pile-driver into place. In the northern area, most of these activities would be located in and gain access through a heavily industrialized commercial area that sees little public traffic and can readily accommodate the vehicles necessary to perform the proposed work. However, the proposed activities on the right bank of the creek and farther south along the left bank would primarily occur within residential neighborhoods. The

exemptee intends to install floodwalls in these areas and not levees, eliminating the need to haul soils and significantly reducing the number of truck trips required. Furthermore, the length of floodwalls in the residential areas is limited, reducing the number of vehicles required to make delivers and the duration of the work. However, access and staging areas in these settings are limited, and the exemptee will be required to make arrangements with property owners to gain access through private land; see *Supplemental EA Section 3.2.8, Land Use.*

3.2.12 Air Quality

3.2.12.1 Affected Environment

Air quality within the project area is described in the October 1 EA and the affected environment remains the same for the purposes of this Supplemental EA.

3.2.12.2 Environmental Effects

Major construction activities are anticipated to start in early 2021 and be complete by the end of 2023. Construction activities will be completed using a combination of off-road and portable construction equipment. Given the amount and type of off-road construction equipment and the anticipated duration of construction, it is likely that the construction activities will lead to the production of air pollutants in excess of emission thresholds established by the Bay Area Air Quality Management District (BAAQMD). Pollutants likely to be produced during construction activities include reactive organic gasses and nitrogen oxides, which are precursors to ozone formation, carbon monoxide, sulfur dioxides, and particulate matter. The primary source of combustion related emissions during construction will be diesel powered stationary and mobile sources, though heavy metals and silica dust emitted from the concrete batch operation could also result in exposure to toxic air contaminants.

Installation of the exemptee's proposed flood management measures and modifications to the Coyote percolation pond will require use of diesel fueled on-road vehicles to haul and deliver material and equipment. More directly, the work will require the use of pile drivers with an associated generator and earth moving equipment, increasing the amount of diesel particulate matter released at these locations.

The exemptee intends to control the production of combustion related emissions by requiring the use of properly maintained late model equipment and limiting idling times. The exemptee may also use alternative fuels and/or install aftermarket control technology on the equipment.

In addition to combustion related pollutant sources, land clearing, grading, excavation, and on-site hauling of material could result in fugitive dust emissions. Furthermore, a portion of the proposed tunnel will be excavated through rock containing

naturally occurring asbestos. Those susceptible to dust exposure would be workers at the site and, under certain wind conditions, nearby residents. In order to limit dust exposure, the exemptee intends to wet possible dust producing material, including those containing naturally occurring asbestos during transport on the site. Once stockpiled, the exemptee plans to cover excavated material to limit the generation of dust. The exemptee will also limit ground-disturbing activities during high wind conditions, install windbreaks, plant fast-germinating vegetative ground cover, and limit the transport of soils off site by washing vehicles and placing gravel or mulch at construction entrances.

For this action, mass emissions for construction could be substantial; however, it is anticipated that the health effects from the proposed action will generally be low compared to background incidences of such health effects. This is the result of the relatively low level of emissions from the proposed activities compared to the total emissions in the surrounding area. Similarly, the additional on-road vehicular traffic resulting from the construction activities will be insignificant when compared to existing traffic volumes, and air pollutants produced by the additional traffic will be comparatively negligible.

The operational emissions for the project will be similar to existing operation with the addition of an emergency generator at the tunnel facility. Although this generator will be capable of releasing diesel particulate matter, it will require permitting under BAAQMD regulations, which will ensure that emissions of air pollutants and toxic air contaminants are consistent with applicable stationary source requirements requiring the use of best available control technology.

4.0 CONCLUSIONS

4.1 Staff Recommended Measures

Commission staff recommended a number of measures in the October 1 EA. These included developing and implementing the following:

- Water Temperature Monitoring Plan
- Sedimentation and Turbidity Monitoring Plan
- Supplement to the Fish Rescue and Relocation Plan
- Fisheries Monitoring Adaptive Management Plan
- Models for forecasting streamflow and water temperature conditions
- Supplements to the Habitat Criteria Monitoring Plan
- Site-specific plans during construction
- Invasive Species Monitoring and Control Plan
- An interagency work group
- BMPs for mitigating effects to wildlife and terrestrial resources
- Conditions of the SCVHP

- Phytophthora Pathogen Management Plan
- Wetland and Riparian Habitat Dryback Monitoring Plan
- Amphibian Disease and New Zealand Mud Snail Monitoring Plan
- Milkweed Survey Plan
- Western Pond Turtle Monitoring and Relocation Plan and Invasive Red-eared Slider Removal Plan
- A temporary parking lot and access trail to the trails in the Rosendin Park area
- Recreation related avoidance and minimization measure (AMM REC-1), to provide advance notice of limited access or closure of recreation facilities
- Notification to CalFire of the reservoir drawdown, provide general bathymetry data, and if needed, identify measures to ensure safe helicopter access to reservoir waters at deadpool for firefighting activities
- Implementing the stipulations of the PA
- Using local stone or other materials and native plants for revegetation or vegetative screening after construction

Commission staff supplement the October 1, 2020 EA by recommending the following additional measures:

- Supplements, if needed, to required plans from the October 1, 2020 Order to include all FOCP areas, including:
    - Phytophthora Pathogen Management Plan
    - Wetland and Riparian Habitat Dryback Monitoring Plan
    - Milkweed Survey Plan
- Continuing to implement conditions of the SCVHP
- Planning Level Designs for the Adjustable Weirs
- North Channel Monitoring Plan
- Gravel Augmentation and Restoration Plan
- Site Specific Construction Plan for the ADTP

4.2 Unavoidable Adverse Effects

The *October 1 EA Section 4.2 Unavoidable Adverse Effects* noted unavoidable adverse effects associated with the reservoir drawdown and related actions. Commission staff supplement the October 1 EA by discussing the following additional unavoidable adverse effects.

While the reservoir is at an elevation of 488 ft, the discharge from the existing outlet and the new tunnel during high flow events will result in an increase in TSS in Coyote Creek above existing conditions. This will cause short-term temporarily adverse effects to water quality in Coyote Creek downstream of the dam. As required by the

Commission's October 1, 2020 Order, Valley Water is required to develop and implement a Sediment Discharge Monitoring Plan to monitor suspended sediment discharges from Anderson Reservoir, and to monitor the effect of the discharges on Coyote Creek downstream of the dam, which will inform adaptive management of measures to minimize the discharge of suspended sediment.

Indirect disturbance to pallid bats is expected during construction. Noise and light disturbance during construction is likely to cause some abandonment of the pallid bat maternity roost in the barn near Cochrane Road, a decline in the number of bats using that roost, and/or the loss of multiple pallid bat individuals within an occupied roost (at any time of year). This species' populations and available habitat are limited locally and regionally. Because the roost within the barn near the FOCP area is the largest and most stable known roost in Santa Clara County, the loss of, or substantial decline in the number of individuals using a roost in this barn or elsewhere in the vicinity will result in a decline in this species' regional populations. Valley Water proposes a number of mitigation measures to minimize such effects including performing surveys for roost occupancy by a qualified biologist, establishing buffers around the barn to minimize light and noise disturbance, monitoring for effects, and implementing further interventions when potential adverse effects are noted.

Implementing the ADTP will result in the permanent removal of the Toyon Group Picnic Area as well as a number of family picnic sites within the Live Oak Day Use Area. Portions of the Serpentine Trail will be removed, and it is unclear whether a new trail linking the Live Oak Day Use Area to the crest of Anderson Dam will be rebuilt in the future. These effects, while permanent, represent a small portion of the recreation facilities located within Anderson Lake County Park and thus the loss of these facilities is considered a moderate adverse effect. The quality of the recreation experience for those using the remaining recreation facilities at the Live Oak Day Use Area will be diminished during construction due to noise, the loss of vegetative cover, and the presence of security fencing, resulting in a minimal short-term adverse effect. Valley Water is encouraged to work with County Parks to create a second group picnic area elsewhere within the park and to construct a new trail to the dam crest upon completion of the seismic retrofit to replace the lost recreation facilities.

Installation of flood management measures will result in short-term and long-term adverse effects. Short-term minimal adverse effects, such as noise and traffic associated with construction equipment, are expected for residential and park lands near the sites where flood management measures will be installed. The introduction of flood management measures into parks, especially in high-visibility areas, and next to residential properties will be a long-term adverse effect to recreation and aesthetic resources. Elevation of structures will likely result in long-term adverse effects to aesthetic resources. The severity of the effect on aesthetic resources is anticipated to be minor to moderate depending upon how well the modified structures blend into the

surrounding neighborhood. Valley Water is required to implement stipulations of the PA including determining effects to historic properties and developing mitigation. Valley Water will need to seek concurrence from the SHPO regarding any effects analysis pertaining to its plans for the residential property located at 120 Arroyo Way.

4.3 Consistency with Comprehensive Plans

Section 10(a)(2) of the FPA, 16 U.S.C., § 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. We reviewed the following seven comprehensive plans that are applicable to the Anderson Dam Hydroelectric Project, located in California. No inconsistencies were found.

California Department of Fish and Game. 1990. Central Valley Salmon and Steelhead Restoration and Enhancement Plan. Sacramento, California.

California Department of Fish and Game. 1996. Steelhead Restoration and Management Plan for California. Sacramento, California.

California Department of Fish and Game. 2007. California Wildlife: Conservation Challenges, California's Wildlife Action Plan. Sacramento, California.

California Department of Fish and Wildlife. 2008. California Aquatic Invasive Species Management Plan. Sacramento, California.

California Department of Parks and Recreation. 1994. California Outdoor Recreation Plan.

California State Water Resources Control Board. 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan.

National Marine Fisheries Service. 2016. Final Coastal Multispecies Recovery Plan for California Coastal Chinook Salmon, Northern California Steelhead, and Central California Coast Steelhead.

Although it does not have Comprehensive Plan status under Section 10(a)(2) of the FPA, we also reviewed the SCVHP during our analysis within this Supplemental EA.

5.0 FINDING OF NO SIGNIFICANT IMPACT

As stated in the October 1 EA, Valley Water will implement dam safety IRRMs through its Reservoir Drawdown and Operations Plan to comply with the Commission's February 20, 2020 dam safety directives for Anderson Dam. Valley Water began the drawdown of the Anderson Dam reservoir on October 1, 2020. Valley Water proposes to implement a number of BMPs, mitigation measures, and conditions from the SCVHP to avoid, minimize, and mitigate adverse effects associated with the drawdown of the reservoir. In our October 1 EA effects analysis, we considered not only the implementation of a reservoir drawdown, but also the period of time that a reduced reservoir could last, potentially until the ADSRP is completed in 2030 based on Valley Water's projections. A sustained reservoir drawdown has the potential to create adverse effects to water quantity, water quality, and aquatic resources including steelhead which is federally listed as threatened under the ESA, if not appropriately mitigated. We recommended Valley Water implement the measures we defined as our staff alternative to mitigate the adverse effects associated with a sustained reservoir drawdown. We also noted that beginning the reservoir drawdown to deadpool will reduce dam safety risk and should be implemented absent any further action on the ADTP.

Through this Supplemental EA, we analyzed Valley Water's proposal to construct and operate a low-level outlet and tunnel, reopen the northern channel of Coyote Creek, replace the downstream Coyote percolation dam, and implement downstream flood control measures. These actions, collectively considered with the reservoir drawdown, CVP extension, existing outlet works modifications, and reservoir rim stability improvements, have the potential to create adverse effects to water quantity, water quality, aquatic and terrestrial resources, and recreational resources. Commission staff recommends a number of measures to mitigate adverse effects including implementing the ESA emergency section 7 conservation recommendations provided by NMFS and FWS, conditions of the WQC, BMPs, and additional measures recommended by Commission staff. Valley Water's implementation of the measures identified in the staff alternative will, on balance, offset adverse effects of the proposed actions.

On the basis of our independent analysis, we find that approval of the proposed Reservoir Drawdown and Operations Plan, with the implementation of mitigation measures we define as our staff alternative, will not constitute a major federal action significantly affecting the quality of the human environment.

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APPENDIX A

Table A-1. Issues Commonly Raised in Comments and Responses to Them

Commenter	Summary of Issue	Response
Jeffrey Hare, Ted Smith, Edward Ruder, John Fioretta	**Issue #1: Potential Impacts of Coyote Creek Flooding Downstream on Private Property Located in San Jose, California.**	
	Commenters expressed concern that sediment deposition, trash, and overgrown vegetation within Coyote Creek's channel restrict flows, thus reducing channel capacity and increasing the likelihood of future flooding events. Also stated open spaces and limited duration of drawdown would limit flood risk. Questioned why houses must be purchased or modified rather than allowed to undergo occasional flooding as has occurred in the past. Mr. Smith, Mr. Ruder, and Mr. Fioretta expressed concern regarding elevating or acquiring structures adjacent to Coyote Creek. Mr. Fioretta also noted that homeless encampments along Coyote Creek exacerbates the flooding issue.	Valley Water identified several structures that would be elevated or acquired in order to remove the risk of periodic flooding. See *Supplemental EA Section 3.2.8.2 Environmental Effects*. Commission staff assessed the channel capacity and flood level concerns in section 3.2.2.2 *Water Quantity Environmental Effects* of this *Supplemental EA*. While Valley Water acknowledged that unhoused individuals may be living in the Coyote Creek corridor, no detailed information regarding the severity of this issue was filed. Commission staff suggest that Valley Water notify any unhoused occupants to vacate the area prior to implementing the downstream flood management measures. See *Supplemental EA Section 3.2.8.2 Environmental Effects*.
Santa Clara County Department of Parks & Recreation	**Issue #2: Potential Impacts of Coyote Creek Flooding Downstream on County Park Lands.**	
	Commenter expressed concern that recreation facilities and infrastructure may be temporarily or permanently flooded.	Permanent flooding of recreation facilities or infrastructure along the Coyote Creek corridor on County Park lands is not expected. Implementation of Coyote Creek Flood Management Measures

		should reduce the likelihood of temporary flooding. See *Supplemental EA Section 3.2.7.2 Environmental Effects*
Santa Clara County Department of Parks & Recreation	**Issue #3: Contaminated Sediments being Released Downstream.**	
	Commenter expressed concern that mercury contaminants in Ogier Ponds might be released downstream.	Mercury contaminates will be addressed in a Mercury, Diazinon and PCBs Plan, as required by the Water Board's Water Quality Certification. The Plan will include, in part, evaluation and discussion of the potential for mobilization or methylation of mercury associated with project implementation, as well as measures to reduce the amount of methylmercury or mercury methylation in the watershed as affected by the project.
Santa Clara County Department of Parks & Recreation	**Issue #4: Impacts to Coyote Creek Trail.**	
	Commenter expressed concern that environmental monitoring efforts may damage the trail or create hazards for trail users.	Comment noted. Commission staff recommended that Valley Water work with County Parks to address this concern. See *Supplemental EA Section 3.2.7.2 Environmental Effects*
Santa Clara County Department of Parks & Recreation	**Issue #5: Lack of Consultation Regarding Cross Valley Pipeline (CVP) Extension.**	

	Commenter indicated that the proposed terminus of the CVP extension is located on land owned by Santa Clara County Parks & Recreation, but no consultation regarding development of the project was conducted with the agency.	Comment noted. Valley Water is required to acquire the rights/permissions needed to implement the requirements of the Commission's October 1, 2020 Order.
Santa Clara Valley Open Space Authority (Open Space Authority)	**Issue #6: Groundwater Recharge, In-stream Flows, Water Recharge and Storage Infrastructure, and Stewardship of the Groundwater Basin and Ecological Needs.**	
	Commenter expressed desire for agencies to work with Valley Water in ensuring sufficient flow for groundwater recharge, adequate flow for salmonids and other ecological resources, and adequate storage and groundwater recharge infrastructure.	Effects on downstream water supply arise primarily from the drawdown, and were analyzed in sections 3.3.2 *Water Quantity*, 3.3.4 *Aquatic Resources*, and 3.3.6 *Threatened and Endangered Species and Essential Fish Habitat* of the *October 1 EA*. The Commission and other agencies are consulting and coordinating with Valley Water on its proposals to maintain groundwater recharge and protect aquatic habitat.
Paula Rasmussen	**Issue #7: Availability of Water for Combating Wildfires.**	
	Commenter expressed concern that the water remaining in the reservoir during the drawdown would be insufficient to combat wildfires in the area.	While the volume of water in the reservoir will be greatly diminished at deadpool, the remaining water is adequate for CalFire to access via helicopter. See *October 1 EA, Section 3.3.8.2 Affected Environment* and October 16, 2020 filing from Valley Water.
California Trout (CalTrout)	**Issue #8: Cumulative Effects to Salmon and Steelhead**	
	CalTrout requested implementation of habitat restoration and mitigation measures to reduce cumulative impacts to aquatic species.	Valley Water is required to implement the Sediment Discharge Monitoring Plan and will monitor affects to spawning gravel habitat in the CWMZ during the FOCP. This monitoring will identify the effects of sedimentation on habitat in Coyote Creek throughout FOCP, and can be used to inform mitigation or restoration actions. In this EA, Commission staff recommend Valley Water enact the restoration

		activities contained in NMFS's August 31, 2020 conservation recommendations, which will include gravel augmentation and channel and floodplain restoration actions. See *Supplemental EA, Section 3.2.6.3 Conservation Recommendations*.
Valley Water	**Issue #9: Public Access to Rosendin Park Area Trails.**	
	Commenter indicated that public access will be available to the trails in the Rosendin Park area of Anderson Lake County Park via a parking lot at the terminus of Holiday Drive.	Public access to the trails in the Rosendin Park area has historically been from the boat launch parking lot, which includes 15 single vehicle parking spaces (50+ additional spaces on dam crest) and a restroom, as well as from the parking lot off Holiday Drive which includes 8 parking spaces. Holiday Drive is a private road and thus without the consent of the owner, the public cannot use the road to access the trails. Additionally, the Holiday Drive parking lot is insufficient to accommodate demand for trail access. See *October 1 EA, Section 3.3.7.1 Affected Environment.*
Valley Water	**Issue #10: Fisheries and Aquatic Habitat Cooperative Effort Agreement (FAHCE).**	
	Commenter indicated that the FAHCE settlement agreement will not be submitted for Commission approval, only the rule curves from that document will be filed with the Commission to address post-construction operations.	Clarification noted. Footnote 33 of the October 1 EA noted that the FAHCE Agreement was developed separate from the exemption and was not filed for Commission approval.
Valley Water	**Issue #11: Clarifications regarding various items within the October 1 EA**	
	Commenter requested a number of clarifications regarding issues identified in the EA, including the following:	
	1) Timespan to be addressed in the scope of analysis and clarification about reservoir level.	A reduced reservoir is expected from the IRRM and is expected to be in place through the completion of the ADSRP. Therefore, *October 1 EA Section 3.2 Scope of Cumulative Effects Analysis* assumed a

		reduced reservoir through ADSRP completion as a cumulative effect. See also clarifications in *Supplemental EA Sections 2 3.1 Scope of Cumulative Effects Analysis* and *3.1.2 Temporal Scope* regarding reservoir elevation and acknowledgement that the full extent of the ADSRP has not been proposed or filed with the Commission.
	2) Valley Water stated it did not agree to monthly water temperature monitoring, but will keep the TWG apprised during meetings.	2) Comment noted. The reporting timeframe of the Coyote Creek water temperature monitoring is required to be included in Valley Water's Temperature Monitoring Plan as required by the Commission's October 1, 2020 Order.
	3) Identification of coldwater management zone species	3) The table and text in *Supplemental EA, Section 3.2.4.1 Aquatic Resources* is revised based on the information provided by Valley Water
	4) Status of fall-run Chinook salmon	4) The table and text in *Supplemental EA, Section 3.2.4.1 Aquatic Resources* is revised based on the information provided by Valley Water and NMFS
	5) Fish ladder operations	5) The text in *Supplemental EA, Section 3.2.4.1 Aquatic Resources* has been updated to reflect year-round operation of the ladder
	6) Impact of fine sediment on lamprey	6) The effects of fine sediment on lamprey ammocoetes in *Supplemental EA, Section 3.2.4.2 Aquatic Resources* has been amended to reflect implementation of the Mercury, Diazinon, and PCBs Plan required by the WQC
	7) Impact of temperature on native fish in Coyote Creek	7) The effects of temperature on native fish in *Supplemental EA, Section 3.2.4.2 Aquatic Resources* has been revised to reflect ability of Chinook and lamprey to utilize habitat in the CWMZ and water temperature monitoring in Coyote Creek.

	8) Fisheries monitoring methods	8) Comment noted. The October 1 Order requires development of fisheries monitoring methods in consultation with the resource agencies.
	9) Archaeological investigations and impacts on cultural and historic resources	(9)(a) In response to the comment that Commission should include a source or citation for the reference expedited procedures, the citation for the expedited procedures can be found in section 1.3.5 of the October 1, 2020 EA that we requested expedited review pursuant to 36 C.F.R. § 800.3(g), the California SHPO agreed expedited consultation is appropriate. (b) Valley Water feels that to comply with the NEPA disclosure requirements, impacts and mitigations should be disclosed in the EA based upon existing information. Commission staff addressed the effects to historic and cultural resources based upon on all information on the record for the reservoir drawdown, and in section 3.3.9.2, addressed how the stipulations of the implemented PA, which clarify the framework to address any potential adverse effects on historic properties and cultural resources due to the reservoir drawdown and the construction of the low-level outlet.
	10) Impacts to water supply	These effects are analyzed in the *October 1 EA*, section 3.3.2.2 *Water Quantity, Environmental Effects, p.* 31. The reliability of imported water is dependent upon hydrologic conditions in the rest of the state and the needs of competing users if supply becomes scarce. Moreover, imports can mitigate for but not entirely negate the fact that Anderson reservoir, the principal purpose of which is water conservation and supply, will have its useful storage

		eliminated or restricted for the duration of the FOCP. Previously, Valley Water could make use of imports and storage in Anderson reservoir, whereas now it will be required to rely predominantly on imports alone, which Valley Water has less direct control over than it does storage behind Anderson dam. Hence, why we found the proposed action to have an unavoidable adverse impact on water supply.
	11) Clarification about the staff alternative.	The staff alternative is the applicant's proposed action in addition to consideration of resource agency recommendations or conditions and Commission staff identified measures. See *October 1 EA Sections 2.4 Staff Alternative with Recommended Measures* and *4.1 Staff Recommended Measures,* and *Supplemental EA Section 2.3 Staff Alternative with Recommended Measures* and *4.1 Staff Recommended Measures*.
	12) Why effects identified are not considered significant	Commission staff concluded in *October 1 EA and Supplemental EA Section 5.0 Finding of No Significant Impact* that the implementation of measures identified in the staff alternative will offset adverse effects of the proposed action.