

# Vallecitos Channel Maintenance Project



## Initial Study / Mitigated Negative Declaration



March 2021

For additional accessibility assistance with this document, please contact the Alameda County Water District's Engineering and Technology Services Department at (510) 668-4499, via email at [EngOffice@acwd.com](mailto:EngOffice@acwd.com), or through the California Relay Service by dialing 711. This document includes complex figures, tables, and formulas that may be difficult to interpret using an assistive device such as a screen reader.

**Alameda County Water District**

**Vallecitos Channel Maintenance Project**

**Initial Study/Mitigated Negative Declaration**

Prepared for:

Alameda County Water District  
43885 S. Grimmer Boulevard  
Fremont, CA 94538  
Contact: Kerri Smyth  
(510) 668-4486

Prepared by:

Horizon Water and Environment, LLC  
266 Grand Avenue, Suite 210  
Oakland, California 94610  
Contact: Ken Schwarz, Ph.D.  
(510) 986-1851

*With assistance from:*

Waterways Consulting, Inc.  
H. T. Harvey and Associates

March 2021

Horizon Water and Environment. 2021.  
Vallecitos Channel Maintenance Project. Initial  
Study/Mitigated Negative Declaration. March. (HWE  
20.022) Oakland, CA.

# Table of Contents

<b>Chapter 1</b>	<b>Introduction .....</b>	<b>1-1</b>
1.1	Intent and Scope of this Document.....	1-1
1.2	Public Involvement Process.....	1-2
1.3	Organization of this Document .....	1-2
1.4	Impact Terminology .....	1-3
<b>Chapter 2</b>	<b>Project Description.....</b>	<b>2-1</b>
2.1	Background and Project Need .....	2-1
2.2	Project Objectives.....	2-8
2.3	Project Location and Setting .....	2-9
2.4	Description of the Proposed Project .....	2-9
2.4.1	Proposed Project Treatments .....	2-9
2.4.2	Construction Plan.....	2-25
2.4.3	Construction Best Management Practices .....	2-29
2.5	Operation and Maintenance .....	2-29
2.6	Permits and Approvals .....	2-30
<b>Chapter 3</b>	<b>Environmental Checklist.....</b>	<b>3-1</b>
3.1	Aesthetics .....	3.1-1
3.1.1	Regulatory Setting.....	3.1-1
3.1.2	Environmental Setting .....	3.1-2
3.1.3	Discussion of Checklist Responses .....	3.1-3
3.2	Agriculture and Forestry Resources .....	3.2-1
3.2.1	Regulatory Setting.....	3.2-1
3.2.2	Environmental Setting .....	3.2-3
3.2.3	Discussion of Checklist Responses .....	3.2-3
3.3	Air Quality.....	3.3-1
3.3.1	Regulatory Setting.....	3.3-1
3.3.2	Environmental Setting .....	3.3-6
3.3.3	Discussion of Checklist Responses .....	3.3-7
3.4	Biological Resources .....	3.4-1
3.4.1	Regulatory Setting.....	3.4-2
3.4.2	Environmental Setting .....	3.4-8

3.4.3	Discussion of Checklist Responses .....	3.4-21
3.5	Cultural Resources.....	3.5-1
3.5.1	Regulatory Setting.....	3.5-1
3.5.2	Environmental Setting .....	3.5-3
3.5.3	Discussion of Checklist Responses .....	3.5-3
3.6	Energy.....	3.6-1
3.6.1	Regulatory Setting.....	3.6-1
3.6.2	Environmental Setting .....	3.6-2
3.6.3	Discussion of Checklist Responses .....	3.6-3
3.7	Geology, Soils, and Seismicity .....	3.7-1
3.7.1	Regulatory Setting.....	3.7-2
3.7.2	Environmental Setting .....	3.7-3
3.7.2	Discussion of Checklist Responses .....	3.7-5
3.8	Greenhouse Gas Emissions .....	3.8-1
3.8.1	Regulatory Setting.....	3.8-1
3.8.2	Environmental Setting .....	3.8-4
3.8.3	Discussion of Checklist Responses .....	3.8-5
3.9	Hazards and Hazardous Materials.....	3.9-1
3.9.1	Regulatory Setting.....	3.9-2
3.9.2	Environmental Setting .....	3.9-3
3.9.3	Discussion of Checklist Responses .....	3.9-4
3.10	Hydrology and Water Quality.....	3.10-1
3.10.1	Regulatory Setting.....	3.10-2
3.10.2	Environmental Setting .....	3.10-4
3.10.3	Discussion of Checklist Responses .....	3.10-7
3.11	Land Use and Planning .....	3.11-1
3.11.1	Regulatory Setting.....	3.11-1
3.11.2	Environmental Setting .....	3.11-2
3.11.3	Discussion of Checklist Responses .....	3.11-3
3.12	Mineral Resources.....	3.12-1
3.12.1	Regulatory Setting.....	3.12-1
3.12.2	Environmental Setting .....	3.12-2
3.12.3	Discussion of Checklist Responses .....	3.12-2
3.13	Noise.....	3.13-1
3.13.1	Noise Concepts and Terminology .....	3.13-1
3.13.2	Regulatory Setting.....	3.13-3
3.13.3	Environmental Setting .....	3.13-5

3.13.4 Discussion of Checklist Responses .....	3.13-5
3.14 Population and Housing .....	3.14-1
3.14.1 Regulatory Setting.....	3.14-1
3.14.2 Environmental Setting .....	3.14-1
3.14.3 Discussion of Checklist Responses .....	3.14-2
3.15 Public Services .....	3.15-1
3.15.1 Regulatory Setting.....	3.15-1
3.15.2 Environmental Setting .....	3.15-1
3.15.3 Discussion of Checklist Responses .....	3.15-2
3.16 Recreation .....	3.16-1
3.16.1 Regulatory Setting.....	3.16-1
3.16.2 Environmental Setting .....	3.16-1
3.16.3 Discussion of Checklist Responses .....	3.16-1
3.17 Transportation.....	3.17-1
3.17.1 Regulatory Setting.....	3.17-1
3.17.2 Environmental Setting .....	3.17-2
3.17.3 Discussion of Checklist Responses .....	3.17-4
3.18 Tribal Cultural Resources.....	3.18-1
3.18.1 Regulatory Setting.....	3.18-1
3.18.2 Environmental Setting .....	3.18-3
3.18.3 Discussion of Checklist Responses .....	3.18-3
3.19 Utilities and Service Systems .....	3.19-1
3.19.1 Regulatory Setting.....	3.19-1
3.19.2 Environmental Setting .....	3.19-3
3.19.3 Discussion of Checklist Responses .....	3.19-5
3.20 Wildfire .....	3.20-7
3.20.1 Regulatory Setting.....	3.20-7
3.20.2 Environmental Setting .....	3.20-8
3.20.3 Discussion of Checklist Responses .....	3.20-9
3.21 Mandatory Findings of Significance .....	3.21-11
3.21.1 Discussion of Checklist Responses .....	3.21-11
<b>Chapter 4 Environmental Factors Potentially Affected.....</b>	<b>4-1</b>
<b>Chapter 5 Determination.....</b>	<b>5-1</b>
<b>Chapter 6 Report Preparation .....</b>	<b>6-1</b>
<b>Chapter 7 References .....</b>	<b>7-1</b>

## Appendices

Appendix A	Administrative 100% Design Plans
Appendix B	Hydraulic Modeling Summary Memorandum
Appendix C	Air Quality and Greenhouse Gas Emissions Calculations
Appendix D	Biological Resources Information
Appendix E	Biological Resources Existing Conditions Report
Appendix F	Cultural Resources Report
Appendix G	Noise Calculations
Appendix H	Draft Mitigation Monitoring and Reporting Program

## List of Tables

Table 2-1.	Estimated Treatment Distance.....	2-10
Table 2-2.	Proposed Project Affected Parcels .....	2-10
Table 2-3.	Estimated Construction Worker and Equipment Details by Phase .....	2-27
Table 2-4.	Applicable Permit and Regulatory Requirements .....	2-31
Table 2-5.	Applicable Construction BMPs for the Proposed Project .....	2-33
Table 3-1.	BAAQMD Air Quality Thresholds of Significance.....	3.3-5
Table 3-2.	Estimated Criteria Pollutant Emissions for the Proposed Project.....	3.3-8
Table 3-3.	Habitat within the Project Area.....	3.4-10
Table 3-4.	Special-Status Animal Species with Potential to Occur on the Project Site .....	3.4-22
Table 3-5.	Temporary Impact Acreages to Habitat for the California Red-legged Frog within the Proposed Project Footprint. ....	3.4-22
Table 3-6.	Temporary Impact Acreages to Upland Dispersal Habitat for California Tiger Salamander and Alameda Whipsnake within the Proposed Project Footprint.....	3.4-23
Table 3-7.	Estimated Fuel Consumption .....	3.6-3
Table 3-8.	Summary of Calculated Flood Peaks .....	3.10-5
Table 3-9.	Examples of Common Noise Levels.....	3.13-2
Table 3-10.	Construction Equipment and Vibration Distances .....	3.13-6
Table 3-11.	Native American Consultation .....	3.18-3

## List of Figures

Figure 2-1. Project Vicinity .....	2-4
Figure 2-2. Vallecitos Channel Vicinity Map .....	2-5
Figure 2-3. Photos of the Vallecitos Channel .....	2-6
Figure 2-4. Project Site, Access, and Staging Areas .....	2-13
Figure 2-5. Proposed Project Treatments .....	2-15
Figure 3-1. CNDDDB Plant and Sensitive Natural Community Records .....	3.4-11
Figure 3-2. CNDDDB Animal Records .....	3.4-13
Figure 3-3. Habitat Map.....	3.4-15

## Acronyms and Abbreviations

°F	degrees Fahrenheit
<b>A</b>	
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACWD	Alameda County Water District
ADT	Average Daily Traffic
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act (Pub. Res. Code Section 2621 et seq.)
AMM	avoidance and minimization measure
ATCM	airborne toxic control measure
<b>B</b>	
BAAQMD	Bay Area Air Quality Management District
BAU	business as usual
BMP	Best management practice
<b>C</b>	
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game (now California Department of Fish and Wildlife)
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Conservation, Division of Mines and Geology
CDPR	California Department of Pesticide Regulation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFCs	chlorofluorocarbons

CFR	Code of Federal Regulations
cfs	cubic feet per second
CH <sub>4</sub>	methane
CMA	Congestion Management Agency
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalents
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
cy	cubic yards
<b>D</b>	
dB	decibel
dBA	A-weighted decibel
District	Alameda County Water District
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
<b>E</b>	
EACCS	East Alameda County Conservation Strategy
EBRPD	East Bay Regional Park District
EIA	U.S. Energy Information Agency
EMFAC	In-Use Off-Road Diesel Emission Factors
EO	Executive Order
ESA	Endangered Species Act
<b>F</b>	
F&G Code	California Fish and Game Code
Farmland	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
fugitive dust	PM10 and PM2.5

**G**

GHG	greenhouse gas
GIS	geographic information system
GMM	General Minimization Measures
GSA	Groundwater Sustainability Agencies
GSP	groundwater sustainability plan
GWP	global warming potential

**H**

HAP	hazardous air pollutant
HCP	Habitat Conservation Plan
HHWP	Hetch Hetchy Water and Power
HMMP	Habitat Restoration Mitigation and Monitoring Plan
Hz	Hertz

**I**

I-680	Interstate 680
in/sec	inches per second
IS/PUBLICMND	Initial Study/Mitigated Negative Declaration

**K**

kV	kilovolt
----	----------

**L**

$L_{dn}$	day/night noise level
$L_{eq}$	equivalent sound level
$L_{max}$	maximum sound level
$L_{min}$	minimum sound level
LOS	level of service
LUST	leaking underground storage tank

**M**

MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MRZ	Mineral Resources Zone
MT	metric tons

**N**

NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEHRP	National Earthquake Hazards Reduction Program
NHPA	National Historic Preservation Act

NHTSA	National Highway Traffic Safety Administration
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCR	National Resource Conservation Service
NRCS	U.S. Department of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSF	National Science Foundation
NWIC	Northwest Information Center
<b>O</b>	
O <sub>3</sub>	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	ordinary high water mark
OPR	California Governor's Office of Planning and Research
<b>P</b>	
PBO	programmatic biological opinion
PG&E	Pacific Gas and Electric Company
PM <sub>10</sub>	particulate matter of aerodynamic radius of 10 micrometers or less
PM <sub>2.5</sub>	particulate matter of aerodynamic radius of 2.5 micrometers or less
Porter–Cologne Act	Porter–Cologne Water Quality Control Act
PPV	peak particle velocity
Project, Proposed Project	Vallecitos Channel Maintenance Project
Pub. Res. Code	Public Resources Code
Public Law 95-124	National Earthquake Hazards Reduction Act of 1977
<b>R</b>	
RCPS	Regional Climate Protection Strategy
RCRA	Resource Conservation and Recovery
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RSP	rock slope protection
RWQCB	Regional Water Quality Control Board
<b>S</b>	
SAFE Vehicles	Safer Affordable Fuel-Efficient Vehicles
SARA	Superfund Amendment and Reauthorization Act
SB	Senate Bill
SBA	South Bay Aqueduct

SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIP	California State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SO <sub>2</sub>	sulfur dioxide
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
<b>T</b>	
TAC	toxic air contaminant
TCR	tribal cultural resource
<b>U</b>	
U.S.	United States
U.S. 101	United States Highway 101
UCMP	University of California Museum of Paleontology
USACE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
<b>V</b>	
VdB	vibration velocity in decibels
VHFSZ	Very High Fire Severity Zone
VMT	vehicle miles traveled
<b>W</b>	
Williamson Act	California Land Conservation Act of 1965
WQC	Water Quality Certification
WRCC	Western Regional Climate Center

## Chapter 1

### INTRODUCTION

The Alameda County Water District (District or ACWD) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of construction and operation of the proposed Vallecitos Channel Maintenance Project (Project or Proposed Project). The Proposed Project and its location are described in depth in Chapter 2, *Project Description*. This document was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the CEQA Guidelines (14 California Code of Regulations [CCR] Section 15000 *et seq.*).

### 1.1 Intent and Scope of this Document

This IS/MND has been prepared in accordance with CEQA, under which the potential environmental effects of the Proposed Project are evaluated at a project level of analysis (CEQA Guidelines Section 15378). The District, as the lead agency under CEQA, will consider the Proposed Project's potential environmental impacts when considering whether to approve the Project. The IS/MND does not recommend approval or denial of the Proposed Project but provides decision-makers and the public with information on which to base an informed decision.

The site plans for the Proposed Project included in this IS/MND are at the administrative 100% level of design. The District anticipates that the final design for the Proposed Project would include some modifications to these plans, and the environmental analysis has been developed with conservative assumptions regarding potential project impacts to accommodate some level of modification.

This IS/MND describes the Proposed Project; its environmental setting, including existing conditions and regulatory setting, as necessary; and the potential environmental impacts of the Proposed Project on, or with regard to, the following topics:

Aesthetics	Land Use and Planning
Agriculture/Forestry Resources	Mineral Resources
Air Quality	Noise
Biological Resources	Population and Housing
Cultural Resources	Public Services
Geology, Soils, and Seismicity	Recreation
Greenhouse Gas Emissions	Transportation and Traffic
Energy	Tribal Cultural Resources
Hazards and Hazardous Materials	Utilities and Service Systems
Hydrology and Water Quality	Wildfire

## 1.2 Public Involvement Process

Public disclosure and dialogue are priorities under CEQA. CEQA Guidelines Sections 15073 and 15105(b) require that the lead agency designate a period during the IS/MND process when the public and other agencies can provide comments on the potential impacts of the Proposed Project. Accordingly, the District is now circulating this document for a 30-day public and agency review period. The electronic version of this document is available online at: <https://www.acwd.org/128/Public-Notices>

To provide input on this project, please send comments to the following contact:

Kerri Smyth  
Alameda County Water District  
43885 S. Grimmer Boulevard  
Fremont, CA 94538  
Email: [kerri.smyth@acwd.com](mailto:kerri.smyth@acwd.com)

During its deliberations on whether to approve the Proposed Project, the District will consider all comments received before 5:00 p.m. on the date identified in the Notice of Intent for closure of the public comment period.

## 1.3 Organization of this Document

This IS/MND contains the following components:

Chapter 1, *Introduction*, provides a brief description of the intent and scope of this IS/MND, the public involvement process under CEQA, and the organization of and terminology used in this IS/MND.

Chapter 2, *Project Description*, describes the Proposed Project including its purpose and objectives, the site where the Proposed Project would be constructed, the construction approach and activities, operation-related activities, and related permits and approvals.

Chapter 3, *Environmental Checklist*, presents the checklist used to assess the Proposed Project's potential environmental effects, which is based on the model provided in Appendix G of the CEQA Guidelines. This chapter also includes a brief environmental setting description for each resource topic and identifies the Proposed Project's anticipated environmental impacts, as well as any mitigation measures that would be required to reduce potentially significant impacts to a less-than-significant level.

Chapter 4 *Environmental Factors Potentially Affected*. This chapter lists the environmental factors potentially affected by the Proposed Project based on the environmental impact evaluation in Chapter 3.

Chapter 5, *Determination*. This chapter contains a determination of the environmental effects of the Proposed Project based on conclusions and recommendations of the environmental evaluation.

Chapter 6, *Report Preparers*, provides a list of persons involved in preparing this IS/MND.

Chapter 7, *References*, provides a bibliography of printed references, web sites, and personal communications used in preparing this IS/MND.

Appendices. The following appendix materials are provided to support the environmental evaluation:

Appendix A	Administrative 100% Design Plans
Appendix B	Hydraulic Modeling Summary Memorandum
Appendix C	Air Quality, Greenhouse Gas Emissions, and Energy Calculations
Appendix D	Biological Resources Information
Appendix E	Biological Resources Existing Conditions Report
Appendix F	Cultural Resources Report
Appendix G	Noise Calculations
Appendix H	Draft Mitigation Monitoring and Reporting Program

## 1.4 Impact Terminology

This IS/MND uses the following terminology to describe environmental effects of the Proposed Project:

- A finding of *no impact* is made when the analysis concludes that the Proposed Project would not affect the particular environmental resource or issue.
- An impact is considered less than significant if the analysis concludes that there would be no substantial adverse change in the environment and that no mitigation is needed.
- An impact is considered *significant* if it would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by using specific significance criteria as a basis of evaluation. Mitigation measures are identified to reduce otherwise significant impacts to a less-than-significant level.

This IS/MND identifies particular mitigation measures that are intended to lessen Proposed Project impacts. The State CEQA Guidelines (14 CCR Section 15370) define mitigation as:

- avoiding the impact altogether by not taking a certain action or parts of an action;
- minimizing impacts by limiting the degree or magnitude of the action and its implementation;

- rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- compensating for the impact by replacing or providing substitute resources or environments.

## **2.1 Background and Project Need**

Alameda County Water District (District or ACWD) provides safe, reliable and high-quality potable water supply to three cities in the southern San Francisco Bay Area (Fremont, Newark and Union City), serving a population of over 351,000 residents, local industries and health and safety agencies. The Vallecitos Channel is a critical component in District's water supply system. The channel is located in unincorporated Alameda County, south of Highway 84 (Vallecitos Road), and north of San Antonio Reservoir (**Figure 2-1**). The Vallecitos Channel is an engineered, unlined, earthen trapezoidal channel that extends nearly 12,000 linear feet from the California Department of Water Resources (DWR) South Bay Aqueduct (SBA) turnout in the upper Alameda Creek watershed to Vallecitos Creek near Vallecitos Lane in the lower watershed. The Vallecitos Channel Maintenance Project (Project or Proposed Project) area extends from the head of the channel where the SBA emergency culvert outlet is located and extends downstream 7,980 feet (**Figure 2-2**). Ownership along and adjacent to the Vallecitos Channel in the Project area varies between District right-of-way (via condemnation or easement), area of common use (via joint use agreement between the District and Pacific Gas and Electric Company [PG&E]), and private property.

Downstream of the Vallecitos Channel confluence with Vallecitos Creek, water flows into Arroyo de la Laguna, Alameda Creek, and then Niles Canyon where some flows are impounded and diverted in the City of Fremont to recharge the Niles Cone Groundwater Basin. The Vallecitos Channel is a critical component in ACWD's overall water supply system that provides potable water to the District's customers. During dry years when the Niles Cone Groundwater Basin becomes drawn down, the channel is particularly important for recharging the basin for both water supply and water quality purposes as the recharge helps protect the basin against saline intrusion from the San Francisco Bay.

With ongoing climate change, droughts are anticipated to become more severe and occur more frequently. The Vallecitos Channel is considered an essential component of ACWD's climate change adaption planning as the channel will continue to convey SBA water for water supply purposes and help protect the basin from saline intrusion associated with sea level rise. In addition to conveying SBA water to the District for water supply purposes, the Vallecitos Channel also serves as an "emergency release" discharge location for DWR in its operation of the SBA.

Bank erosion and sloughing have been an ongoing issue for the Vallecitos Channel. From 1980 to 1998, the District completed a series of bank repair and stabilization projects of varying size within the Project area to address severe erosion and to stabilize bank sloughing where it threatened the access road along the left (south) bank. In 2010, the crossings at Drop Structures #5 and #10 were replaced to allow light vehicle traffic and cattle to traverse the channel at those locations. In 2014, ACWD repaired 220 feet of the left (south) bank by constructing a willow wall (at approximately Stations 4+60 to 5+25). Since then, maintenance of the Vallecitos Channel has been limited to mowing the adjacent access road.

Under current (2021) conditions, the Vallecitos Channel requires additional maintenance to restore its designed and important water conveyance utility. At several locations, severe streambank erosion and bank shearing on the left (south) bank have reduced the right-of-way width and rendered the maintenance road along the top of the left (south) bank unusable for vehicles. In **Figure 2-3**, Photos 6, 7 and 12 show existing channel conditions where severe bank erosion is evident, and the access road width is insufficient.

In addition to several eroded streambanks, dense emergent vegetation obstructs flow in several sections of the channel (e.g., directly downstream of Drop Structure #8 and Drop Structure #11) deflecting flow horizontally, exacerbating bank erosion and resulting in localized flooding. In Figure 2-3, Photos 7 and 9 through 11 show a few areas of the channel where dense stands of vegetation are present.

Although originally designed for peak flows at 120 cubic feet per second (cfs) from the SBA emergency discharge events, the existing channel has reportedly overtopped in some areas at flows of approximately 20 cfs due to a combination of sediment accumulation and overgrowth of in-channel vegetation. The District developed the Proposed Project to address the channel's primary maintenance needs to address the streambank repair, vegetation management, and flood management issues described above. Channel maintenance is required to provide operational flexibility for the District's water supply system needs.

Several instream processes are causing the existing bank erosion:

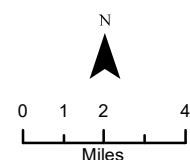
- 1) Higher velocity discharges associated with SBA flow releases in combination with the presence of dense emergent vegetation at certain channel locations.** Emergent vegetation (e.g., cattail [*Typha* spp.] and tule [*Schoenoplectus acutus*]) has grown thick in the channel over long periods of low flow conditions and ample sunlight, which supports this type of vegetation growth. When higher peak flows due to large storms or SBA discharge events occur, water is forced around the thick mat of vegetation and deflected more directly into the streambank. This flow diversion process is highly erosional and increases the erosive force of SBA release flows. The resulting toe erosion creates steep and unstable banks and has undercut ACWD's maintenance road.
- 2) Rapid flow recession (drawdown) following SBA flow releases.** When SBA discharges recede and eventually stop, the water level in the channel draws down rapidly. When

this happens, streambanks that had been wet and saturated become dry and exposed. The hydrostatic pressure (pore water pressure) in the soil within the still-wet streambank exerts pressure outward toward the now-exposed streambank where the water has receded. When this occurs and soil pore water pressure outward toward the channel increases, the risk for streambank erosion, slumping, and failure increases.

- 3) Internal erosion or piping through subsurface voids.** In some areas, rodents have burrowed into the access road and upper streambank, creating seepage paths for groundwater and pathways that collect and concentrate overland stormwater (sheet) flow. These subsurface voids can increase the rate of internal erosion in embankments and the potential for catastrophic bank failure.
- 4) Erosion at drop structures.** Strong eddy forces occur downstream of drop structures, resulting in the failure of grouted rock slope protection (RSP) and/or gabions along each bank, with subsequent undercutting and erosion behind drop structure wing walls. In some instances, erosion at the head of the drop structures undercuts the concrete and threatens structural damage.



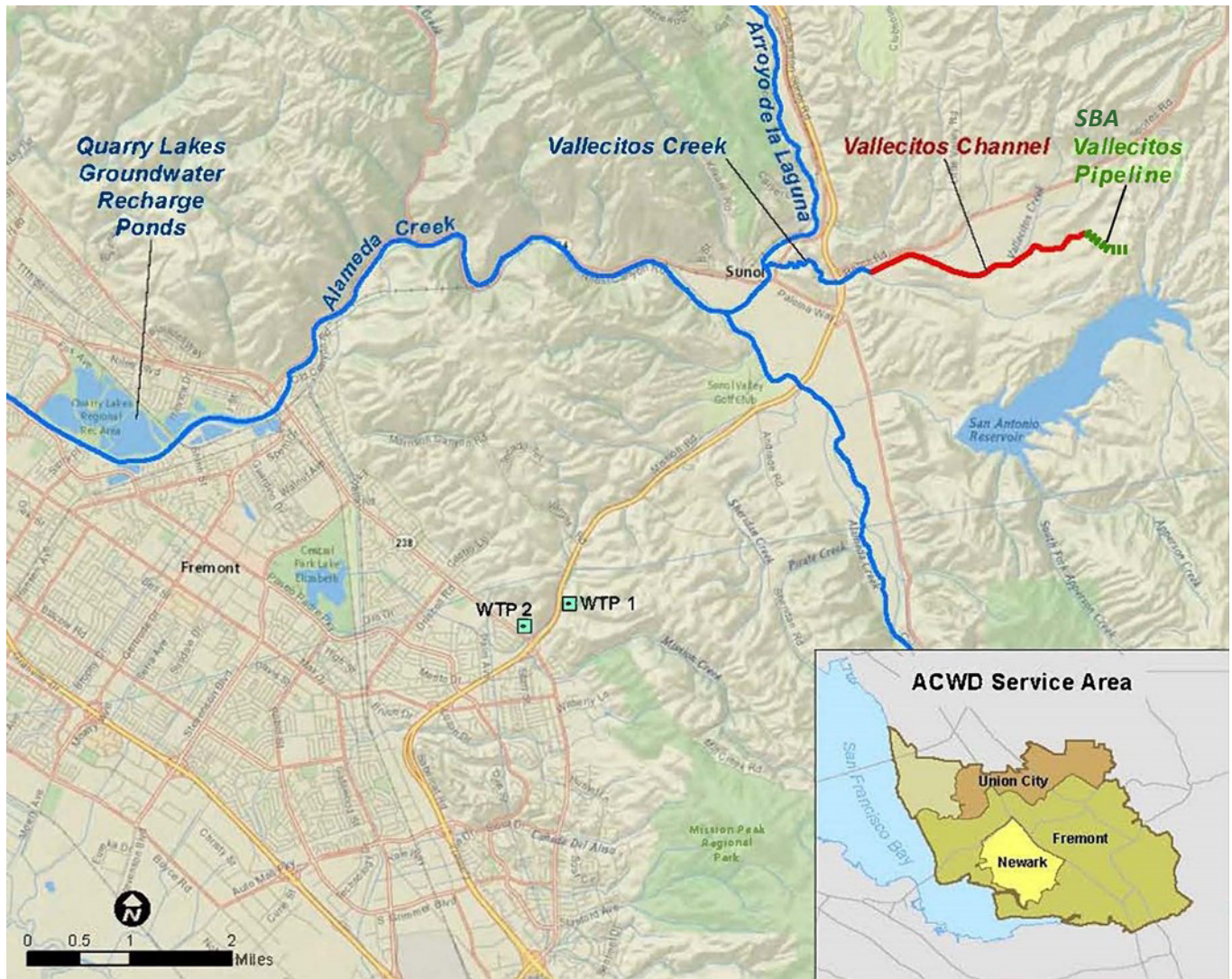
**Figure 2-1.**  
**Project Vicinity**



Prepared by:



**Vallecitos Channel Maintenance Project**



Source: WRE 2017

**Figure 2-2.**  
**Vallecitos Channel Vicinity Map**

Prepared by:



**Vallecitos Channel Maintenance Project**



**Photo 1.** View of channel headworks structure where the SBA pipe transitions to the trapezoidal channel (October 2015)



**Photo 2.** View of SBA turnout structure (October 2015)



**Photo 3.** View of drop structure #12 (downstream side) where grouted rock slope protection is proposed to fill void (May 2018)



**Photo 4.** Typical view of an existing drop structure (upstream side) (October 2015)



**Photo 5.** Existing channel conditions near Station 71+00 and 72+00 where vegetation and sediment management and partial RSP is proposed (May 2018)



**Photo 6.** Existing channel conditions near Station 79+00 where substantial bank erosion is evident but roadway width is sufficient. Partial RSP proposed at this location (May 2018)

**Figure 2-3.**  
**Photos of the Vallecitos Channel (1 of 2)**



**Photo 7.** Existing channel conditions near Station 92+50 where the remaining width of the access road is inadequate and full RSP is proposed (May 2018)



**Photo 8.** Existing channel conditions near Station 94+00 where rodent burrowing is evident and undermining both the maintenance road and a culvert outfall that drains into Vallecitos channel (May 2018)



**Photo 9.** Existing channel conditions near Station 97+00. Treatment methods proposed at this location include vegetation and sediment management as well as willow staking (May 2018)



**Photo 10.** Existing channel conditions near station 104+00 where a large stand of tules are present and riparian enhancement work is proposed (May 2018)



**Photo 11.** Existing channel conditions near Station 127+00 where significant erosion is evident and full RSP treatment is proposed (May 2018)



**Photo 12.** Existing channel conditions between Stations 125+00 and 126+00 where severe bank erosion is evident and the remaining width of the access road is insufficient. Full RSP is proposed at this location (May 2018)

**Figure 2-3.**  
**Photos of the Vallecitos Channel (2 of 2)**

Given the uniformity of the channel, variables such as slope and radius of curvature do not appear to influence bank erosion as much as dense vegetation in combination with SBA flow releases. Without sediment removal and vegetation management actions in the channel, the capacity of the Vallecitos Channel will remain reduced and flows will continue to flood adjacent properties. Further, without bank repair and stabilization actions, channel flows will continue to erode the bank rendering the District's access road unusable for vehicles.

One of the fundamental constraints to the maintenance and operation of the Vallecitos Channel is its very narrow easement corridor in which ACWD has the ability to access, operate, and maintain the channel. The narrowness of ACWD's ownership corridor presents physical constraints in how streambank erosion can be addressed and also presents an urgency for the project in that, in some locations, the access road has already been damaged to such an extent that vehicle use is no longer possible.

## 2.2 Project Objectives

The Proposed Project objectives include the following:

- **Maintain ACWD's Regional Water Supply Reliability and Water Quality Needs:** Provide critical flow (up to 120 cfs) from SBA during dry years to recharge the Niles Cone Groundwater Basin for use in providing potable water to ACWD's customers and to protect the groundwater basin from saline intrusion from the San Francisco Bay and sea level rise.
- **Restore Maintenance Access:** Repair the access road to allow for channel safety inspections and maintenance.
- **Contain and Convey SBA Emergency Discharge Events:** Restore channel cross-sectional area to increase channel capacity and convey SBA emergency discharge events up to 120 cfs.
- **Repair Eroded Streambanks:** Stabilize and restore areas of severe streambank erosion.
- **Reduce Flood Risk:** Attenuate flood impacts to private properties adjacent to the channel.
- **Improve Water Quality:** Improve water quality by reducing streambank erosion and sediment loading to the channel.
- **Provide Habitat Enhancement:** Establish riparian/wetland habitat by creating several instream bench areas.

## 2.3 Project Location and Setting

The Vallecitos Channel is an engineered, unlined, trapezoidal channel used to convey water from the SBA approximately 2.5 miles to Vallecitos Creek (Figure 2-2). The Vallecitos Channel was designed and constructed circa 1965 to provide a design capacity of 120 cfs. The principal components of the Vallecitos Channel between the SBA and the Vallecitos Creek confluence downstream include the following:

- Turnout structure at the connection to the SBA;
- 2,160-foot-long, 42-inch-diameter reinforced concrete pipe that daylights at the upstream end of the channel;
- Channel headworks structure where the pipe from the SBA transitions to the trapezoidal channel;
- 11,600 feet of unlined (earthen) trapezoidal channel;
- 13 drop structures positioned along the trapezoidal channel, with a drop elevation ranging between 9 and 12 feet; and
- An unimproved access road that parallels the left (south) bank of the channel and connects with Vallecitos Lane at the downstream end of the channel.

The Vallecitos Channel was designed and generally constructed with a 6-foot-wide bottom, 1.5-horizontal-to-1-vertical (1.5H:1V) side slopes, and variable depth ranging from 5 to 8 feet. A series of concrete drop structures control the channel slope (grade control) and help regulate flow velocity. The channel bottom is fairly flat between drop structures, with slopes generally ranging from approximately 0.0008 to 0.0010. A single-lane unimproved access road extends along the entire length of the channel's left bank (when looking downstream) (**Figure 2-4**). Several drainage ditches and small tributary channels discharge into the Vallecitos Channel via culverts that protrude from the channel banks. Current land use and land cover surrounding the channel in the upper Vallecitos Creek watershed include mixed grassland/rangeland for cattle grazing, undeveloped easements beneath utility powerlines, horse stable and training facility, and a recreational paint-ball facility. As described above, the channel corridor that ACWD can work within is extremely narrow and the ability to grade back the streambanks to a slope less steep than 1.5:1 is not possible.

## 2.4 Description of the Proposed Project

### 2.4.1 Proposed Project Treatments

Design and construction of the Proposed Project are focused on accomplishing the project objectives described in Section 2.2 above. The proposed treatment types and associated

maintenance activities are described in more detail below. **Appendix A** includes the Administrative 100% Design Drawings for the Proposed Project. **Table 2-1** includes estimated lengths of the proposed treatments; however, actual lengths may vary slightly based on field conditions at the time of construction. Treatment locations are shown on **Figure 2-5**. Typical cross-section views of proposed treatments are shown in Appendix A. **Table 2-2** summarizes parcels that that would be affected by the Project.

**Table 2-1. Estimated Treatment Distance**

<b>Proposed Treatments</b>	<b>Estimated Treatment Length (linear feet)</b>
Vegetation Management	832
Sediment Removal	1,195
Bioengineering Treatments (without RSP)	267
Partial Rock Slope Protection	153
Full Rock Slope Protection	712
Grouted RSP at Drop Structure #12	30
<b>Total Estimated Treatment Length Below Ordinary High Water Mark (OHWM):</b>	3,189
Upland Drainage Improvements	959
In-channel Riparian/Wetland Benches	601
<b>Total Estimated Treatment Length Above OHWM:</b>	1,560

**Table 2-2. Proposed Project Affected Parcels**

<b>Assessor Parcel Number (APN)</b>	<b>Property Owner</b>	<b>Project Element</b>
96-365-1-1	ACWD	Access from District maintenance road
96-365-3-2	Private property	Proposed Project treatments
96-365-6-2, 96- 365-1-4	Private property	Access from District maintenance road
96-365-6-1	ACWD	Proposed Project treatments
96-365-5	Private property	Proposed Project treatments

Assessor Parcel Number (APN)	Property Owner	Project Element
96-365-7-1	Private property	Temporary construction access route #3, construction staging, and Proposed Project treatments
96-365-4-2	Private property	Proposed Project treatments
96-360-2	Private property	Temporary construction access route #4
96-360-1-8	Private property	Temporary construction access route #4
96-365-2-5	Private property	Temporary construction access route #2, construction staging
96-375-7-3	Real Estate Division City and County of San Francisco	Access from District maintenance road

### ***Vegetation and Sediment Management***

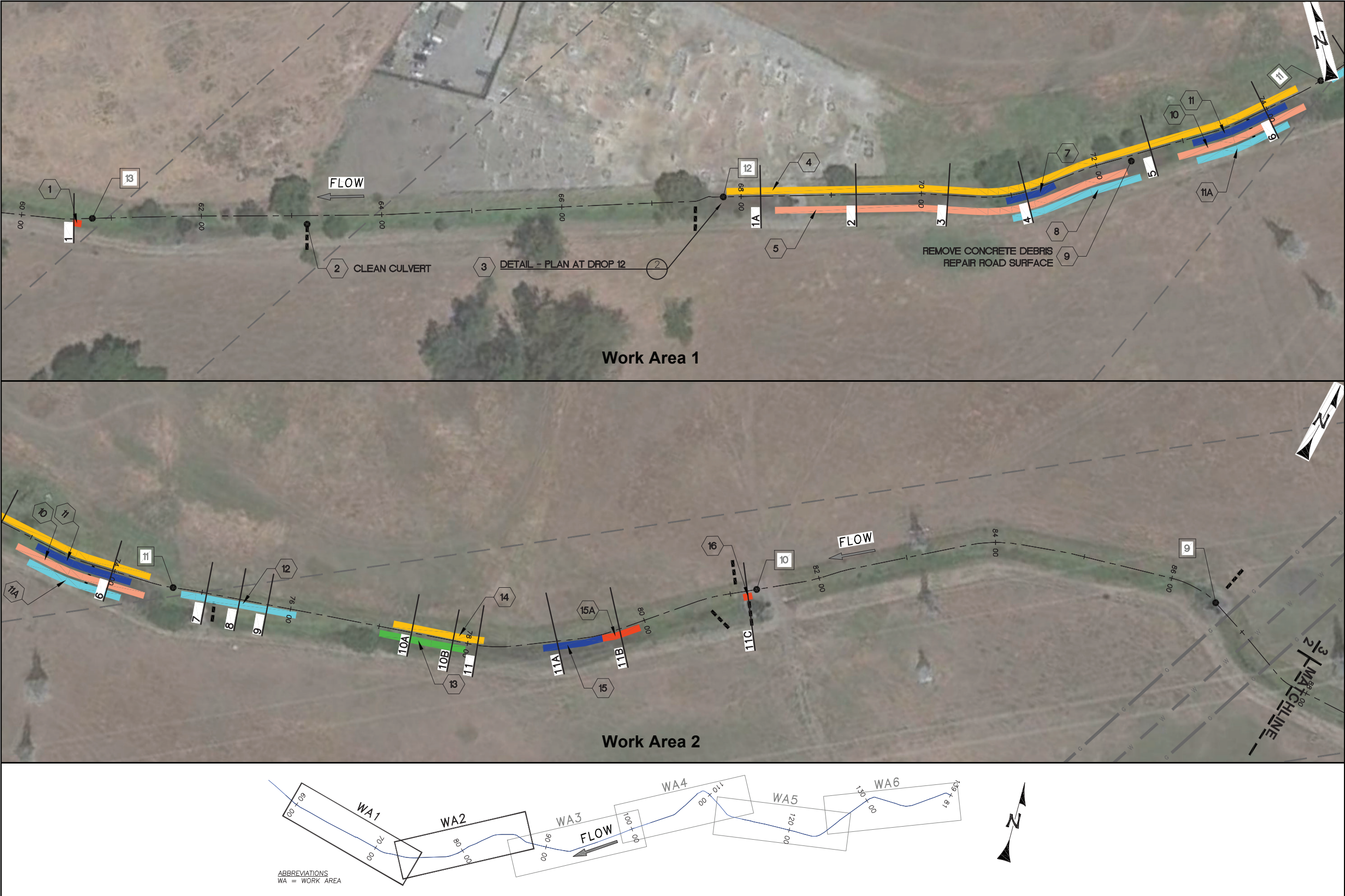
Vegetation management would be implemented in portions of the channel where dense stands of cattail and/or tule currently reduce channel capacity and/or restrict downstream flow and redirect waters into adjacent streambanks resulting in erosion or overtopping of the bank (e.g., directly downstream of Drop Structure #8 and Drop Structure #11). This situation has been observed directly in the field during SBA release flows. Vegetation management would include the removal of emergent vegetation (and associated root masses and sediment deposits) from the channel's center and right (north) bank margin. Where feasible, vegetation along the left bank would be kept in place to help dissipate flow energy along the left bank and to provide riparian habitat. This approach avoids and reduces potential environmental effects of the maintenance work by targeting the vegetation management to only the critical and high-priority treatment locations. Placement of coir logs along the left bank toe may help redirect flow to the center of the channel.

The removal of emergent vegetation would provide the greatest benefit in terms of erosion protection by opening up a flow path down the center/right side of the channel, moving flows away from the currently eroding banks. Additionally, removing the root masses and sediment deposits beneath the vegetation would slow the rate of regrowth and thereby likely reduce the need for follow up vegetation removal in the near future.

*This page intentionally left blank*



*This page intentionally left blank*

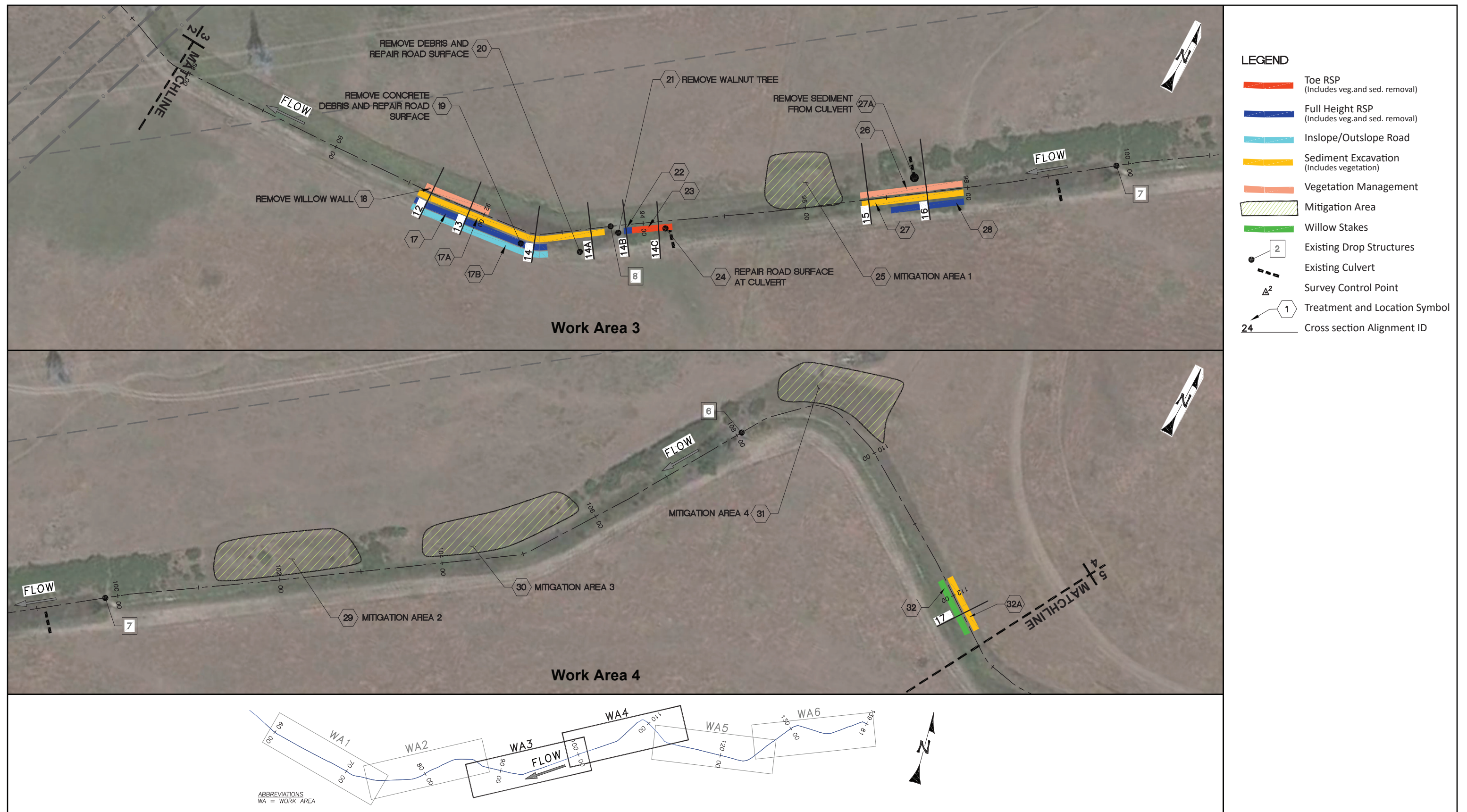


- LEGEND**
- Toe RSP  
(Includes veg.and sed. removal)
  - Full Height RSP  
(Includes veg.and sed. removal)
  - Inslope/Outslope Road
  - Sediment Excavation  
(Includes vegetation)
  - Vegetation Management
  - Mitigation Area
  - Willow Stakes
  - Existing Drop Structures
  - Existing Culvert
  - Survey Control Point
  - Treatment and Location Symbol
  - 24 Cross section Alignment ID

Source: Waterways 2021

**Figure 2-5.**  
**Proposed Project Treatments**  
(sheet 1 of 3)

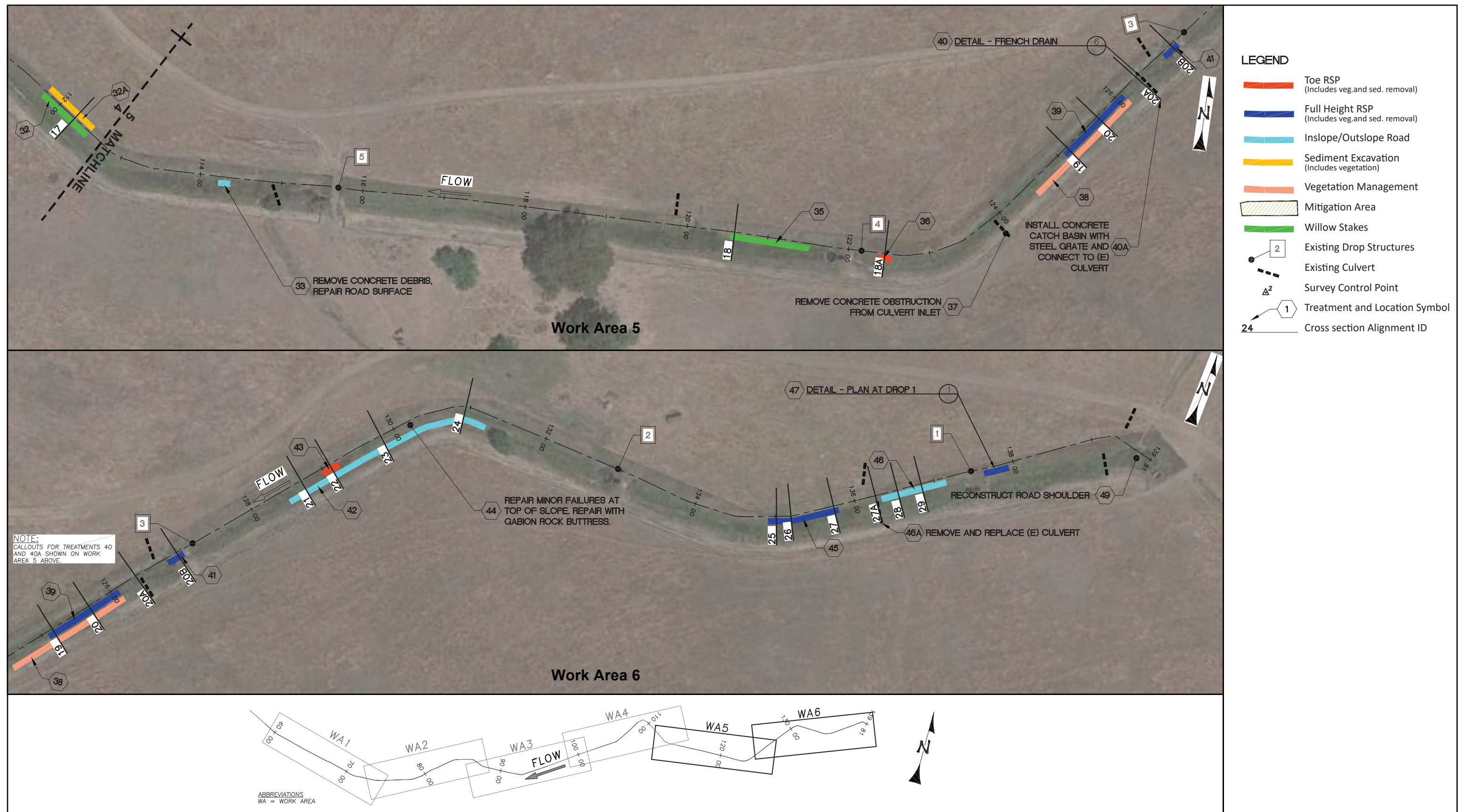
*This page intentionally left blank*



Source: Waterways 2021

**Figure 2-5.**  
**Proposed Project Treatments**  
(sheet 2 of 3)

*This page intentionally left blank*



Source: Waterways 2021

*This page intentionally left blank*

Removal of vegetation would restore channel capacity by removing physical obstructions and decreasing hydraulic roughness. At the same time, erosive forces would be reduced by allowing high flows to access a wider channel cross sectional area, as opposed to being concentrated and forced against one bank. The work would primarily be performed with a long reach excavator stationed out of the channel and above the stream bank on the adjacent access road. Some removed tule would be salvaged for transplanting at the proposed in-channel riparian/wetland benches (described further below). Remaining vegetation that would not be replanted within the Project site would be transported off-site for disposal. At one location downstream of Drop Structure #8, an 85-foot-long willow wall would be removed where full RSP is needed to address severe bank erosion. Willows at this particular location (shown as treatment #18 on Figure 2-5, Sheet 2 of 3) would be salvaged and replanted along the lower slope of the proposed in-channel riparian/wetland benches.

In some areas, accumulated sediment forms large instream bars with minimal emergent vegetation growth, such as directly downstream of Drop Structure #7 (see Figure 2-4). Similar to vegetation management actions, a long reach excavator stationed out of the channel above the streambank on the adjacent access road would remove material from these bars. Removing sediment at these locations would also increase channel conveyance capacity and reduce flood hazards. Sediment would be transported off-site for disposal at an appropriate facility. Since hydrology of the channel is controlled via the channel headworks, most this sediment originates from bank erosion within the Project area with some input from overland sheet erosion. As such, bank stabilization activities completed during construction of the Proposed Project would substantially reduce sediment load to the channel, thereby reducing the need for and extent of subsequent sediment management.

### ***Bioengineering Treatments***

In areas where more recent, or less severe bank erosion is observed and where channel conditions do not pose an immediate threat to the overall stability of the bank or access road, bioengineering treatments would be implemented to arrest and prevent further bank erosion and reinforce soil stability. Bioengineering treatments primarily involve staking of live willows (*Salix* sp.) at the toe or mid-slope. Live willow stakes can be used on their own or in conjunction with other bioengineering materials, such as jute matting or biodegradable coconut fiber blankets. Once established, live willow stakes effectively address a number of stabilization and erosion control problems by binding the soil with their root system and creating a natural vegetative cover. Willow establishment also provides habitat for wildlife.

Where channel conditions permit, the bioengineering treatment approach may include installation of willow walls (or spiling) near the bank toe. This technique uses a combination of willow staking interwoven with willow shoots to form flexible, linear, living structures. Established willow stakes may mature into trees while the willow shoots resist and deflect streamflow helping to stabilize the bank and prevent further erosion.

The establishment of willows would inhibit emergent vegetation growth and improve overall ecological function within the channel. However, as described in more detail in Section 2.5, “Operations and Maintenance,” establishing willows would also increase the need for periodic long-term maintenance in the form of trimming, pruning, and disposing of excess growth in order to maintain the channel conveyance capacity.

### ***Partial Rock Slope Protection***

In areas where bank erosion is severe and willow staking alone would not provide adequate protection, but where the existing width of roadway is sufficient to meet District access requirements (i.e., at least 12 feet in width), RSP would be placed at the bank toe. RSP would be keyed to below the anticipated depth of scour (approximately 2 feet) and would extend up the bank to approximately the 10-year floodwater surface elevation. Where bank heights are low, this elevation may be near the top of bank. At other locations, the 10-year flood elevation may only extend to one third of the bank height. A hydraulic assessment of channel flow conditions and erosive forces conducted by Waterways Consulting provided the design basis and rationale to protect the bank up to the 10-year flood elevation and is provided in **Appendix B** (Waterways Consulting 2016). According to the hydraulic assessment, the calculated erosive forces do not warrant armoring above this height.

At partial RSP sites, the rock would be placed to conform to the existing bank line geometry with minor bank grading anticipated at the upstream and downstream ends of the RSP and above RSP where existing banks are overly steep. The interstices of the rock would be filled with native streambed materials (cobbles, gravels, sands, and fines) jetted into place to provide a planting medium and to protect the native bank materials from piping flow erosion through the rock voids. Geotextile fabric would not be used, as this would inhibit the growth of vegetation. Where partial RSP is recommended, in-channel vegetation management may also be prescribed to allow for RSP installation. Where used in the past along the Vallecitos Channel, RSP without vegetation appears to have performed well, even in the presence of dense emergent vegetation. RSP would reduce future maintenance and repair needs. At two partial RSP sites located downstream of Drop Structures #10 and #13, existing gabions would be demolished.

Where channel conditions allow (i.e., where channel cross-sectional area provides adequate flood conveyance), live willow stakes may be inserted or driven through openings in the RSP. The addition of vegetation, in the form of live willow stakes, would further enhance the structural integrity of the RSP while improving ecological function. However, as discussed above for bioengineering treatments, willow staking would also increase the need for periodic long-term maintenance in order to maintain the channel conveyance capacity.

Note that willow stakes would not be inserted at two partial RSP sites immediately downstream of drop structures #10 and #13 (shown as treatment ID nos. 1 and 16 in Appendix A, Sheet C3). At these two specific sites, the RSP would be installed where existing gabions are currently failing and would be placed in a manner that supports the gabions to remain, serving as in-kind replacement.

### ***Full Rock Slope Protection***

In areas of severe bank erosion where the remaining roadway width is inadequate to serve District access needs (i.e., less than 12 feet in width), the channel bank would be repaired to restore the original bank location. RSP would be keyed to below the anticipated depth of scour (approximately 2 feet) and would extend to the top of bank. The rock would be placed to conform to the original bank line geometry with minor bank grading anticipated at upstream and downstream conforms. The interstices of the rock would be filled with native streambed materials (cobbles, gravels, sands, and fines) jetted into place to provide a planting medium and to protect the native bank materials from piping flow erosion through the rock voids. Geotextile fabric would not be used, as this would inhibit the growth of vegetation. Vegetation management may also be prescribed to allow for RSP installation. Engineered fill would be imported and compacted beyond the top of bank as needed to restore the road to a minimum width of 12 feet.

Where channel conditions allow as described above, live willow stakes may be inserted or driven through openings in the RSP. The addition of willow staking would require future vegetation management to remove willow overgrowth in areas prone to flooding.

### ***Grouted RSP at Drop Structure #12***

The streambanks steepen near the drop structures to an angle that exceeds 1.5H:1V, which is generally considered steeper than the maximum stable grade for un-grouted RSP treatments. For this reason, and because strong eddy forces act in these transition zones, grouted RSP is proposed at Drop Structure #12 where bank erosion abuts the structure. Erosion at the drop structure's outlet has undercut the concrete and threatens structural damage. Grout would be pumped under the exposed concrete slope to fill existing voids and would only be used where existing concrete is present. Grouted RSP has proven to be effective at previously repaired drop structure sites.

### ***Upland Road Drainage Improvements***

In general, the surrounding topography south of the channel slopes northward or northwestward (i.e., toward the channel). However, many segments of the access road are currently out-sloped (i.e., slope away from the channel). As overland runoff reaches the roadway, the out-sloping road redirects runoff parallel to the roadway along the outer edge of the access road. In several locations, this concentrated runoff flows until it reaches a drainage inlet and culvert which directs the flow into the Vallecitos Channel. However, where there is not adequate drainage along the access roadway, runoff has led to gullying and erosion of the access road surface. In several locations, surface runoff and gullying along the road surface has been exacerbated by soil cracks or rodent burrows which create a "piping" condition sending the runoff into the streambank along the channel margin. To help improve drainage and prevent further gullying, the access road would be in-sloped toward the channel. In some locations, however, the access road would be out-sloped to conform the road grade with the existing grade near the property fence line or to repair small sink holes. This treatment would also

require minor road improvements, such as removing sediment and debris from plugged culverts, in-kind culvert replacement at one location, removal of existing concrete or grout road repairs that are failing, backfilling of rodent burrows or subsurface voids, and repairing gullies and minor slope failures at the top of bank. At two locations, gabion rock (2-3 cubic yards [cy] per site) would be used to repair minor slope failures and repair the road surface. In addition, at one site downstream of Drop Structure #3, a 25-foot-long French drain and concrete catch basin would be installed to connect with an existing culvert. These drainage improvements are described and shown in more detail in Appendix A (Sheets C3 through C6). Throughout the duration of road repair work, fiber rolls would be temporarily installed at the top of bank for erosion control purposes. After drainage improvements are complete, disturbed areas would be seeded.

### ***In-Channel Riparian/Wetland Benches***

The District would construct a series of four vegetated in-channel benches by excavating upland areas along the right bank. The benches would be excavated to an elevation just above the ordinary high water mark (OHWM) and would occur near the center portion of the Project area (Figure 2-5). The center of the benches would include depressions, approximately 0.5 to 1 ft deep where salvaged tule plugs removed from vegetation management areas would be transplanted. Salvaged willows removed from the existing willow wall downstream of drop structure #8 would be incorporated along the lower slopes of the benches. In addition, willow stakes and seasonal wetland nursery container stock would be planted throughout the landward side of the cut slope. A typical cross-section view of the riparian/wetland benches is shown in Appendix A (Sheet C22). The proposed in-channel benching would convert approximately 0.61 acre of upland habitat to riparian and wetland habitat. The in-channel benches are intended to provide compensatory mitigation and offset the Project's impacts to jurisdictional wetlands and other waters. These in-channel benches would also help attenuate downstream flooding and support groundwater recharge. The planting palette may be further developed to enhance species diversity and determine on-center spacing and quantities during the Project's design process.

All soil surfaces disturbed by earthwork would be hydroseeded with a native seed mix composed of commercially available grass and forb species from Central or Northern California ecotypes.

Nonnative annual grasses and invasive weed species are abundant at the site and would compete with the native woody riparian species targeted for revegetation. Site preparation would include mechanical clearing and removal of the weed seed bank layer of topsoil from within the footprint of grading areas.

## 2.4.2 Construction Plan

### ***Construction Activities***

Before conducting any in-channel activities, ACWD would coordinate with DWR to ensure that the SBA blow-off valve is shut off and that planned transfers from SBA are put on hold throughout the duration of in-channel activities.

#### Site Preparation

Site preparation would include relocating portions of the existing perimeter fencing along the existing maintenance road to allow vehicle passage in areas where severe bank erosion has occurred, to create vehicle turnarounds, to serve as temporary staging areas, and to accommodate maintenance activities at some work areas (e.g., a culvert replacement, catch basin installation). Vegetation clearing and grubbing may be required along the access road and at some treatment areas prior to grading or excavation. Clearing and grubbing of the site would be conducted using a skid steer, standard excavator, possibly a bulldozer, and hand labor.

#### Dewatering

Project construction activities would occur on a reach-by-reach basis whereby proposed treatments within the same reach would be completed all at once. While the channel should be mostly dry during project construction, ponded water may be present in local depressions. Therefore, depending on channel conditions, some in-channel work within a given reach may require localized dewatering.

Where dewatering is needed, a water diversion system would be installed to dewater each channel reach segment to facilitate in-channel construction and reduce potential impacts to water quality downstream. Diversion dams would be installed at the upstream and downstream ends of the work area to divert flows around the work area through an installed 10-inch plastic pipeline. The diversion dams would consist of gravel-filled bags wrapped in 10 mil plastic.

Discharged water would be pumped in a manner that would prevent excessive turbidity from entering the downstream end of the work area to prevent scour and erosion outside of each work area. Pumped water would be pre-filtered with gravel pack around sumps for subsurface flows and a silt fence or hay bales around pumps for surface flow. Pumped water would be discharged into isolated local depressions, filter bags, settling (Baker) tanks, or temporary sediment basins, as necessary, to meet water quality requirements in the Project's State Water Resources Control Board Construction General Permit. If excessive turbidity is expected where water is to be discharged into the channel, the water would be routed through a sediment interceptor or similar facility to remove sediment from water. After work within a dewatered channel area is complete, the water diversion system would be removed to allow creek flow to return to the channel.

### Earthwork Activities

Construction activities would include excavation (e.g., for vegetation and sediment removal), concrete debris removal, grading, importing and placing fill and RSP, compacting the fill and other materials, and limited grout and concrete work.

Grading would be required to in-slope and out-slope the maintenance access road. Sediment removal activities would occur to a depth of 3.5 feet, and placement of RSP would require a maximum depth of excavation of 5.5 feet. To the extent feasible, graded soil would be reused on-site. A hydraulic hammer/jackhammer would be used to break up and remove concrete in select areas of the channel/maintenance road. For the purposes of this analysis, debris and excavated material that is not suitable for on-site reuse would be composted or disposed of at the Vasco Road Landfill. Haul trucks would be used to deliver fill material to the Project site (approximately 15 cy per load). Fill material would be placed with an excavator and compacted with a skid steer.

**Table 2-3** provides the anticipated number of potential worker and construction-related trips for construction of the Proposed Project. For bioengineering treatments and where channel conditions allow at partial RSP and full RSP sites, willow stakes would be installed by hand.

**Table 2-3. Estimated Construction Worker and Equipment Details by Phase**

Construction Phase	Description of Activities	Duration	Equipment Used	Volume of Off-Hauled Material (CY)	Volume of Imported Fill (CY)	Total Number of Hauling Trips	Number of Daily Workers On-site	Daily Worker Trips (one-way)
Site Preparation	Vegetation clearing and grubbing of staging areas, temporary access routes, and select treatment areas.	5 days	Excavator, skid steer, and possibly a bulldozer	0	0	0	Up to 7	14
Earthwork	Excavation at proposed sediment and vegetation removal areas and riparian/wetland benches, concrete/debris removal, and importing and placement of fill.	40 days	Excavators, skid steers, large loaders, dump trucks, bulldozer, hydraulic hammer/jack hammer, pick-up trucks, chainsaw, and sump pump with generator	Vegetation off-haul volume: 4,333 cy Sediment off-haul: 5,129 cy Concrete: 10 cy	Rock: 1,524 cy	Off-haul round trips: 632 On-haul round trips: 102	Up to 20	40
Planting and Site Restoration	Installation of willows and other native vegetation at proposed riparian/wetland benches, and revegetation of disturbed upland areas.	20 days	Skid steer and pick-up trucks	0	0	0	Up to 7	14

Note: cy = cubic yards.

### ***Construction Equipment***

Proposed Project construction would involve clearing and grubbing, excavation, rock riprap placement, and hauling of soil and material on- and off-site. Some concrete work would be necessary to repair Drop Structure #12. Specific pieces of equipment would be determined by the construction contractor, but are anticipated to include the following types of equipment:

- Excavators (e.g., Caterpillar 336F)
- Skid steers
- Large loaders
- bulldozer (e.g., Caterpillar D8)
- haul trucks
- sump pump with a generator
- Hydraulic hammer/jackhammer
- Compactor
- pick-up trucks
- Manual and powered hand tools and mowers (e.g., weed whacker, hedge trimmer, chainsaw, loppers/handsaw, etc.)

### ***Construction Access and Staging Areas***

A maintenance road parallels the top of the left (south) bank in the Project area. Construction vehicles and equipment would access the Project area while traveling eastbound on State Route 84 (SR-84) from Vallecitos Lane (approximately 0.60 mile east of Interstate 680 [I-680]) which connects with the District's access road, and from three private driveways on the south side of SR-84. These points of entry allow vehicles access to the downstream and upstream extents of the Project area, respectively. Lighter vehicles can cross the channel at Drop Structures #5 and #10. Trucks hauling material from the Project area to Vasco Road Landfill (approximately 17 miles northeast) would continue east on SR-84, merge onto I-580 east, and exit at North Vasco Road. Based on past maintenance projects completed along Vallecitos Channel and previous discussions with the California Department of Transportation (Caltrans), the District recognizes the need to consider traffic safety for construction-related vehicle traffic exiting and merging onto SR-84. Potential traffic impacts of the Proposed Project are discussed in detail in Section 3.16, "Transportation."

Proposed locations for construction staging are shown in Figure 2-4. Designated staging areas have been identified at multiple locations along the channel alignment. Staging may also occur on the District's access road adjacent to the channel. Construction staging areas would provide materials and equipment storage, construction trailers, employee parking, and hazardous materials storage and containment.

The parcels surrounding the Project area are privately owned, with the District maintaining an easement and a right-of-way agreement along the access roads, channel corridor, and Project area. Public access to the site is prohibited, and access is controlled through a series of locked gates, which also limit site access by cattle. No additional security measures would be required for the Proposed Project.

### ***Construction Schedule***

Construction of the Proposed Project would be anticipated to take place from July 2021 to October 2021 and would require an estimated thirteen (13) weeks. Within this timeframe, most of the earthwork activities would occur over an 8-week period. This estimated schedule has been developed based on the design engineer's professional judgment and environmental considerations. The timing and specific sequence of work and methods would be determined by the construction contractor but would comply with the District's operational requirements and environmental protection and mitigation measures determined through CEQA and the regulatory permitting process.

Construction activities would occur Monday through Friday and would be in compliance with the Alameda County Ordinance Code for noise, which limits construction hours to 7:00 a.m. to 7:00 p.m. While no weekend or nighttime work is anticipated, occasional weekend work may be necessary.

#### **2.4.3 Construction Best Management Practices**

Proposed Project construction would utilize and implement best management practices (BMPs) to avoid and minimize adverse effects on people and the environment. BMPs would be implemented before, during, and after construction, as specified. The BMPs for the Proposed Project are identified at the end of this chapter in **Table 2-5**.

### **2.5 Operation and Maintenance**

The Vallecitos Channel rarely receives substantial runoff from large storm events within the watershed. Peak flows within the channel typically result from planned transfers and "blow-off" events from the SBA that discharge into the Vallecitos Channel at the upstream end of the Project area. Past flow records indicate that sustained flows during transfers generally vary up to 30 cfs but can be as high as 40 cfs, while blow-off events have reached 120 cfs. Based on the historic flow record, the District aims to provide adequate capacity for a sustained flow rate of 40 cfs, while providing bank stabilization elements capable of withstanding the higher magnitude episodic flows of 120 cfs when DWR's occasional blow-off events occur.

Under existing conditions, maintenance of the Vallecitos Channel is limited to periodic channel inspections and mowing and trimming upland vegetation along the access road and property fence line. ACWD's maintenance staff (consisting of two workers) inspect the channel approximately 10 times per year and primarily use weed whackers for vegetation management activities.

Once project construction is completed, the channel and proposed treatments, including the in-channel riparian/wetland benches, would be visually inspected annually to identify if vegetation management activities are necessary. The District would maintain the proposed treatment areas and conduct on-going general channel maintenance activities including routine vegetation

management as needed. Ongoing maintenance activities would include inspection and monitoring of drop structures and areas exhibiting severe bank erosion, and minor surface repairs to the access road.

Based on the annual visual inspection, ACWD would prepare a work plan for vegetation maintenance activities to be conducted in that year. In some years, routine vegetation management would be limited to periodic mowing and trimming along the maintenance access road. In other years, routine maintenance may involve trimming of in-channel emergent vegetation within the initial vegetation and sediment management treatment areas affected by construction (identified in Figure 2-5) using manual tools and handheld power tools and trimming or shaping the willow plantings of the Proposed Project to ensure adequate channel conveyance capacity. ACWD may need to trim in-channel emergent vegetation up to two times within the Proposed Project's 5-year regulatory permit term. The trimming of in-channel emergent vegetation would occur if vegetation regrowth directs flows once again into the streambanks or vegetative regrowth reduces channel capacity by more than 20 percent. Willows planted along the lower slopes of the partial and full RSP would be selectively pruned by removing the lower branches and thinning mid-story branches to allow for flood conveyance while promoting taller tree growth and riparian canopy development, maintaining root development, and enhancing and improving overall wildlife habitat. Herbicide may also be employed at the to manage and control growth of invasive species (such as Himalayan blackberry [*Rubus armeniacus*]) at or near treatment areas and the riparian/wetland benches. Chemical treatments would include U.S. Environmental Protection Agency- (USEPA)-approved herbicides for aquatic environments (e.g., Glyphosate, Triclopyr, Imazamox).

## 2.6 Permits and Approvals

**Table 2-4** summarizes permits and regulatory compliance requirements by permitting agency that may be required for the Proposed Project.

**Table 2-4. Applicable Permit and Regulatory Requirements**

<b>Regulatory Agency</b>	<b>Law/Regulation</b>	<b>Purpose</b>	<b>Permit/ Authorization Type</b>
U.S. Army Corps of Engineers (USACE) – San Francisco District	Clean Water Act (CWA) Section 404	Regulates placement of dredged and fill materials into waters of the United States.	CWA 404 Individual Permit
San Francisco Bay Regional Water Quality Control Board (RWQCB)	CWA Section 401 with Waste Discharge Requirements	Water quality certification for placement of materials into waters of the United States.	401 Water Quality Certification
	CWA Section 402	National Pollutant Discharge Elimination System (NPDES) program regulates stormwater and construction discharges.	A Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented in accordance with the State Water Resources Control Board's Construction General Permit Order 2009-0009-DWQ, as amended
	Porter-Cologne Water Quality Control Act	Regulates discharges of materials to land and protection of beneficial uses of waters of the State.	Waste Discharge Requirements
California Department of Fish and Wildlife (CDFW) – Bay-Delta Region	Fish and Game Code (F&G Code) Section 1600	Applies to activities that will substantially modify a river, stream or lake; includes reasonable conditions necessary to protect those resources.	Lake and Streambed Alteration Agreement (1602 permit)
	California Endangered Species Act (CESA) Fish and Game Code Sections 2080.3, 2080.4, and 2081	Applies to activities that could result in take of state-listed threatened or endangered species	Incidental Take Permit

<b>Regulatory Agency</b>	<b>Law/Regulation</b>	<b>Purpose</b>	<b>Permit/ Authorization Type</b>
U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act (ESA)	USACE must consult with USFWS if threatened or endangered species may be affected by the Proposed Project.	Formal Consultation
State Historic Preservation Officer (SHPO)	National Historic Preservation Act (NHPA) Section 106	USACE must consult with SHPO if historic properties or prehistoric archaeological sites may be affected by the Proposed Project.	SHPO Consultation
California Department of Transportation (Caltrans)	California Code of Regulations (CCR) Title 8, Division 1, Chapter 4.4, Article 11, Section 1598	Applies to activities that will create a hazard to public highways.	Encroachment Permit (Traffic Plan)

**Table 2-5. Applicable Construction BMPs for the Proposed Project**

Number	Title	BMP Description
BMPs 1 through 13 will be implemented by the District and its Contractors, as appropriate, for all activities associated with the Proposed Project. The majority of these BMPs are implemented prior to and during construction.		
BMP-1	Construction Work Windows	<p>A. Ground-disturbing activities in the channel will occur during the dry season (April 1 through October 31 or as allowed by permits). The construction work window may be extended provided that there is no measurable precipitation forecasted in the National Weather Service 72-hour forecast and consistent with the terms of regulatory permits and approvals.</p> <p>B. Work activities will occur during daylight hours and will be limited to 7 a.m.–7 p.m.</p> <p>C. No work shall be conducted during or with 24-hours of a rain event (0.25 inches in a 24-hour period).</p>
BMP-2	Area of Disturbance	To minimize impacts on natural resources, soil disturbance will be kept to the minimum footprint necessary to complete project construction. The Project area shall be delineated with high visibility temporary flagging, fencing, or other barrier at least 4 feet in height to prevent encroachment of construction personnel and equipment outside of the construction area. Such flagging/fencing shall be inspected and maintained daily until completion of the project. The flagging/fencing will be removed only when all construction equipment is removed from the site.
BMP-3	Erosion and Sediment Control	<p>A. All soils disturbed or exposed during construction activities will be seeded and stabilized using erosion control measures including, but not limited to, erosion control fabric or hydromulch. Areas below the ordinary high water mark are exempt from this BMP.</p> <p>B. Erosion control fabrics will consist of natural fibers that will biodegrade over time and are wildlife friendly. No plastic or other non-porous material will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff.</p>

Number	Title	BMP Description
		<p>C. Erosion control measures will be installed according to manufacturer’s specifications. Appropriate erosion control measures include, but are not limited to, the following: silt fences, straw bale barriers, erosion control blankets and mats, and soil stabilization measures (e.g., tackified straw with seed, jute blankets, broadcast and hydroseeding).</p> <p>D. All temporary construction-related erosion control methods (e.g., silt fences) shall be removed at the completion of each construction period, or as directed by the Project Engineer.</p>
BMP-4	On-site Hazardous Materials Management	<p>A. An inventory of all hazardous materials used (and/or expected to be used) at the worksite and the end products that are produced (and/or expected to be produced) after their use will be maintained by the worksite manager.</p> <p>B. As appropriate, containers will be properly labeled with a “Hazardous Waste” label and hazardous waste will be properly recycled or disposed of off-site.</p> <p>C. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers or in a storage shed (completely enclosed), with appropriate secondary containment to prevent any spillage or leakage.</p> <p>D. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and will not be allowed to enter surface waters.</p> <p>E. All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water.</p>
BMP-5	Vehicle and Equipment Maintenance	<p>A. Equipment will be thoroughly cleaned of soil and vegetation before being delivered to the site to minimize the potential for spreading pathogens or exotic/invasive species. Equipment will be inspected by ACWD and may be rejected if ACWD determines that it is has not been adequately cleaned.</p> <p>B. Incoming equipment will be checked for leaking oil and fluids. Leaking equipment will not be allowed on the project site.</p> <p>C. All vehicles and equipment will be kept clean. Excessive build-up of oil and grease will not be permitted.</p>

Number	Title	BMP Description
		<p>D. All equipment used for in-channel work will be inspected for leaks each day prior to initiation of work. Action will be taken to prevent or repair leaks prior to use.</p> <p>E. No equipment servicing will take place in the channel.</p> <p>F. If it is necessary for servicing of equipment to take place at the job site, a protected area will be designated for equipment servicing to reduce threats to water quality from vehicle fluid spills. Designated areas will not directly connect to the ground or surface water. The service area will be clearly designated with berms, sandbags, or other barriers. Secondary containment, such as a drain pan, to catch spills or leaks will be used when removing or changing fluids. Fluids will be stored in appropriate containers with covers and will be recycled or disposed of at an appropriate off-site location.</p> <p>G. If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location will be conducted in the lakebed, channel, or floodplain.</p> <p>H. Vehicle and equipment washing can occur on site only as needed to prevent the spread of sediment, pathogens, or exotic/invasive species. No runoff from vehicle or equipment washing will be allowed to enter water bodies without being subjected to adequate filtration (e.g., vegetated buffers, hay wattles or bales, and silt screens). Other proper track out systems can be used to prevent the spread of sediment from the site.</p>
BMP-6	Dust Management Controls and Air Quality Protection	<p>ACWD will implement the following applicable Bay Area Air Quality Management District's (BAAQMD's) Basic Construction Mitigation Measures to reduce emissions of fugitive dust and equipment exhaust:</p> <p>A. All exposed surfaces where construction-related activities are occurring (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered daily.</p> <p>B. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</p>

Number	Title	BMP Description
		<p>C. All vehicle speeds on unpaved roads shall be limited to 15 mph.</p> <p>D. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure [13 CCR Section 2485]). Clear signage shall be provided for construction workers at all access points.</p> <p>E. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</p>
BMP-7	Work Site Housekeeping	<p>ACWD employees and Contractors will implement the following site housekeeping measures during construction:</p> <p>A. Maintain the work site in neat and orderly conditions on a daily basis.</p> <p>B. Leave the site in a neat, clean, and orderly condition when work is complete at the end of each construction season.</p> <p>C. Properly dispose of all trash.</p>
BMP-8	Fill, Spoils, and Stockpiled Materials	<p>Temporary fill materials, excavated spoils that have not yet been hauled off site, and stockpiled material will be placed and protected in a manner such that they are not subject to erosion.</p>
BMP-9	Investigation of Utility Line Locations	<p>An evaluation of the locations of utility lines that could be affected by project construction activities will be conducted prior to construction. The following measures will be implemented:</p> <p>A. Utility excavation or encroachment permits will be required from the appropriate agencies. These permits include measures to minimize utility disruption. The District and its contractors will comply with permit conditions. Such conditions will be included in construction contract specifications.</p> <p>B. Utility locations will be verified through a field survey (potholing) and use of the Underground Service Alert services.</p>

Number	Title	BMP Description
		<p>C. Detailed specifications will be prepared as part of the design plans to include procedures for the excavation, support, and/or fill of areas around utility cables and pipelines. All affected utility services will be notified of the District's design plans and schedule. Arrangements will be made with these entities regarding protection, relocation, or temporary disconnection of services.</p> <p>D. Residents and businesses in the project area will be notified of planned utility service disruption 2 to 4 days in advance, in conformance with state standards.</p> <p>E. Disconnected cables and lines will be reconnected promptly.</p>
BMP-10	Amphibian Avoidance and Minimization	<p>A. Pipes, culverts, and similar materials greater than 4 inches in diameter, will be stored so as to prevent covered wildlife species from using them as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.</p> <p>B. Burrow interiors will be visually inspected prior to any ground disturbance of said burrows. In the event that an animal is observed, the burrow will be avoided until the individual has left on its own volition or been relocated by a qualified biologist to an appropriate location.</p> <p>C. To prevent the accidental entrapment of listed species during construction, all excavated holes or trenches deeper than 6 inches will be covered at the end of each work day with plywood or similar materials or ramped at the end of the work day to allow trapped animals an escape method. Prior to the filling of such holes, these areas will be thoroughly inspected for special status species. In the event that a trapped animal is observed, construction will cease until the individual has been relocated to an appropriate location.</p>
BMP-11	Minimize Spread of Weeds and Invasive Species	<p>ACWD will employ the following measures to minimize the spread of invasive plant species.</p> <p>A. All ground disturbing equipment used adjacent to the riparian corridors will be washed (including wheels, tracks, and undercarriages) both before and after being used at the site (see also BMP-7).</p>

Number	Title	BMP Description
		<p>B. All erosion control materials used on site, such as straw wattles, mulch, and fill material, will be certified weed free.</p> <p>C. All disturbed soils will be stabilized and planted with a native seed mix from a local source following construction.</p>
BMP-12	Fire Prevention	<p>A. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors.</p> <p>B. During the high fire danger period (April 1–December 1), work crews will:</p> <ul style="list-style-type: none"> <li>▪ Have appropriate fire suppression equipment available at the work site.</li> <li>▪ Keep flammable materials, including flammable vegetation slash, at least 10 feet away from any equipment that could produce a spark, fire, or flame.</li> <li>▪ Not use portable tools powered by gasoline-fueled internal combustion engines within 25 feet of any flammable materials unless a round-point shovel or fire extinguisher is within immediate reach of the work crew (no more 25 feet away from the work area)</li> </ul>
BMP-13	Standard Herbicide Use and Application Requirements	<p>A. Only USEPA-approved herbicides for aquatic environments (e.g., Glyphosate, Triclopyr, Imazamox) will be used for invasive plant species control work.</p> <p>B. ACWD will use extreme caution to not apply any herbicide that is not labeled for aquatic use directly to water. If herbicides must be applied next to water, ACWD shall use preventative BMPs to ensure that the chemical does not accidentally flow into or stream through the air into the water.</p> <p>C. Herbicide application will be conducted consistent with the product label specifications, in compliance with the regulations of USEPA, California Environmental Protection Agency (CalEPA), California Department of Pesticide Regulation (CDPR), Cal OSHA, and the local Agricultural Commissioner.</p> <p>D. Herbicide application will not be made within 24 hours of predicted rainfall, or if wind is above 5 miles per hour in accordance with directions on the label to avoid offsite drift. Herbicide application will only occur during dry conditions to prevent sediment and herbicides from entering the water via surface water runoff.</p>

Number	Title	BMP Description
		<p>E. The lowest recommended rate, amount, and concentration to achieve project objectives of herbicides will be utilized to achieve desired control.</p> <p>F. An appropriate non-toxic indicator dye may be added to the tank mix to help the applicator identify areas that have been treated and better monitor the overall application to prevent over-spraying.</p>

*This page intentionally left blank*

## Chapter 3

### ENVIRONMENTAL CHECKLIST

- |  |  |
|--|--|
| <b>1. Project Title</b>  | Vallecitos Channel Maintenance Project   |
| <b>2. Lead Agency Name and Address</b>                                 | Alameda County Water District<br>43885 S. Grimmer Boulevard, Fremont, CA 94538   |
| <b>3. Contact Person, Phone Number and Email</b>                       | Kerri Smyth, P.E.<br>Alameda County Water District<br>(510) 668-4486<br>Kerri.smyth@acwd.com   |
| <b>4. Project Location and Assessor's parcel number (APN)</b>          | Vallecitos Channel near Vallecitos Lane in Alameda County<br>APNs: 96-365-1-1, 96-365-3-2, 96-365-6-2, 96-365-1-4, 96-365-6-1, 96-365-5, 96-365-7-1, 96-365-4-2, 96-360-2, 96-360-1-8, 96-365-2-5, and 96-375-7-3  |
| <b>5. Property Owner(s)</b>  | Alameda County Water District (ACWD or District), District right-of-way, area of common use (per joint agreement between District and PG&E), and private land owners   |
| <b>6. General Plan Designation</b>                                     | Resource Management and Water Management   |
| <b>7. Zoning</b>   | Resource Management and Water Management   |
| <b>8. Description of Project</b>                                       | See Chapter 2, <i>Project Description</i> .  |
| <b>9. Surrounding Land Uses and Setting</b>                            | Water Management and Resource Management; see Chapter 2, <i>Project Description</i> , for more information.  |
| <b>10. Other Public Agencies whose Approval or Input May Be Needed</b> | <ul style="list-style-type: none"> <li>▪ U.S. Army Corps of Engineers</li> <li>▪ San Francisco Bay Regional Water Quality Control Board</li> <li>▪ California Department of Fish and Wildlife, Bay-Delta Region</li> <li>▪ U.S. Fish and Wildlife Service</li> <li>▪ State Historic Preservation Officer</li> <li>▪ California Department of Transportation</li> </ul> |

This chapter of the Initial Study/Mitigated Negative Declaration (IS/MND) assesses the Vallecitos Channel Maintenance Project's (Project's or Proposed Project's) environmental impacts based on the environmental checklist provided in Appendix G of the State California Environmental Quality Act (CEQA) Guidelines. The environmental resources and potential environmental impacts of the Proposed Project are described in the individual sections below. Sections 3.1 through 3.20 provide a brief overview of the regulatory setting and existing environmental conditions for the particular resource topic to help the reader understand the conditions that could be affected by the Proposed Project. In addition, each section includes a discussion of the rationale used to determine the significance level of environmental impacts for each checklist question. Resources reviewed for relevant information are cited as applicable.

### 3.1 Aesthetics

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.1.1 Regulatory Setting

##### ***Federal Laws, Regulations, and Policies***

There are no federal laws, regulations or policies pertaining to aesthetics that are relevant to the Proposed Project.

##### ***State Laws, Regulations, and Policies***

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California (California Department of Transportation [Caltrans] 2020). The state highway system includes designated scenic highways and those that are eligible for designation as scenic highways.

The segment of State Route (SR) 84 from SR 238 east to Interstate 680 (I-680), approximately 0.3 mile west of the Project area, is a designated scenic highway. The nearest eligible state

scenic highway is I-680, which is also approximately 0.3 mile west of the Project area (Caltrans 2019).

### ***Local Laws, Regulations, and Policies***

#### **East County Area Plan**

The *East County Area Plan*, a portion of the Alameda County General Plan, includes the following policies related to protection of visual resources that are pertinent to the Proposed Project (Alameda County Community Development Agency Planning Department 1994).

**Policy 116:** To the maximum extent possible, development shall be located and designed to conform with rather than change natural landforms. The alteration of natural topography, vegetation, and other characteristics by grading, excavating, filling or other development activity shall be minimized. To the extent feasible, access roads shall be consolidated and located where they are least visible from public view points.

**Policy 215:** The County shall manage development and conservation of land within East County scenic highway corridors to maintain and enhance scenic values.

**Policy 278:** The County shall promote flood control measures that advance the goals of recreation, resource conservation (including water quality and soil conservation), groundwater recharge, preservation of natural riparian vegetation and habitat, and the preservation of scenic values of the county's arroyos and creeks.

### **3.1.2 Environmental Setting**

The Project is located in unincorporated Alameda County east of the town of Sunol. The Project area encompasses lands within District right-of-way, lands under common use (via a joint use agreement between the District and Pacific Gas and Electric Company [PG&E]), and private property. Alameda watershed lands owned by the City and County of San Francisco and managed by the San Francisco Public Utilities Commission are to the south of the Project area. To the north of the Project area, regional and local access to the Project area is provided by SR-84, which runs in a west-east direction. Other roadways in the project vicinity include Vallecitos Lane which provides access to the western extent of the Project area, and I-680 which is approximately 0.3 mile west of the Project area. As described in Chapter 2, *Project Description*, during project construction activities, the Project site would also be temporarily accessible from three private driveways, one of which includes the Sunol Paintball Outdoor Park's entrance road.

#### ***Visual Character***

The Project area is largely rural and characterized by the channel itself, rolling grassland hills to the south, multiple transmission lines and towers, and electrical lines. Lands surrounding the Project area are used for grazing purposes. There are a few private residences in the Project vicinity; however, these residences are situated closer to SR-84. The nearest resident is approximately 75 feet away from one of the Project's temporary access routes (identified as

Project Entrance Point #3 in Appendix A). This same residence is approximately 1,400 feet from the channel work area. The visual quality in the Project area is considered high because long-range views of grass-covered hills and natural vegetation are available from SR-84.

### ***Viewer Groups***

The Vallecitos Channel and the District's access road are accessible to District staff only. As such, close-up views of the channel are largely inaccessible to the general public. Close-up views of the channel are limited to patrons of the paintball facility and private residents adjacent to the Project site.

Because the channel is approximately 0.4 mile south of SR-84, due to distance, views of the channel are not accessible to motorists traveling on this highway. Motorists would, however, have intermittent views of the private driveway entrances and Vallecitos Lane, which would be used for temporary access to the Project area.

## **3.1.3 Discussion of Checklist Responses**

### ***a. Substantial Adverse Effect on Scenic Vistas — No Impact***

Because access to the Vallecitos Channel is limited to ACWD staff, only distant public views of the Project area are accessible from SR-84. There are no designated scenic vistas in the Project vicinity. Therefore, the Proposed Project would not have an adverse effect on scenic vistas; **no impact** would occur.

### ***b. Damage to Scenic Resources, including, but not limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway — No Impact***

The Project area is not visible from the segment of SR-84 that is a designated scenic highway (west of I-680), or from I-680, the nearest eligible state scenic highway, both of which are located approximately 0.3 mile away. Therefore, the Proposed Project would have **no impact** on scenic resources.

### ***c. Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and its Surroundings — Less than Significant***

During the Project's construction phase, no close-up public views of construction activities occurring at the Vallecitos Channel would be available. Due to the channel's distance from SR-84, motorists traveling on SR-84 would not have views of construction activities taking place in and along the channel. Motorists traveling on SR-84 would, however, have brief views of construction vehicles and equipment using the temporary access routes identified in Figure 2-4. In addition, due to the speed of travel and because project construction activities would be temporary (limited to 13 weeks), project construction activities would not substantially degrade the overall visual character or quality of public views of the Project vicinity.

Once construction is completed, the proposed treatments at the Vallecitos Channel would not be visible from SR-84 or any other public views. Patrons of the Sunol Paint Ball Facility and adjacent property owners may have partial views of some of the completed treatments. If anything, repairing the eroded channel bank and degraded access road, and planting native vegetation at the riparian/wetland benches would improve the visual character and quality of the area. For these reasons, the Proposed Project would not substantially degrade the existing visual character or quality of public views of the project vicinity. This impact would be **less than significant**.

***d. New Sources of Substantial Light or Glare — No Impact***

The Proposed Project would not include permanent lighting or building surfaces that would create a new source of substantial light or glare. Project construction activities would take place during daytime hours; thus no nighttime lighting would be needed. Consequently, there would be **no impact** related to light or glare.

## 3.2 Agriculture and Forestry Resources

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the Project				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.2.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

No federal laws, regulations, or policies regarding agriculture and forestry resources are applicable to the Proposed Project.

#### ***State Laws, Regulations, and Policies***

##### California Department of Conservation – Farmland Mapping and Monitoring Program

Developed by the California Department of Conservation (DOC), the Farmland Mapping and Monitoring Program (FMMP) provides consistent, timely, and accurate data for use in assessing agricultural land resource status in California. The program utilizes a combination of geographic information systems (GIS), aerial imagery, local agency comments, and other relevant

information to combine soil quality data and current land use information to produce Important Farmland maps.

The FMMP maps out five different farmland categories as well as urban and other land (DOC 2018):

**Prime Farmland** – lands with the best combination of physical and chemical features able to sustain long-term production of crops. The land must be cropped and supported by a developed irrigation water supply that is dependable and of adequate quality during the grow season. It must also have been used for production during the previous 4 years.

**Farmland of Statewide Importance** – lands similar to Prime Farmland but with minor shortcomings such as greater slope or less ability to store moisture.

**Unique Farmland** – soils of lower quality that are used for producing California’s leading agricultural crops. These lands are usually irrigated but may include non-irrigated orchards or vineyards.

**Farmland of Local Importance** – lands such as dryland grains and irrigated pastures that are not considered Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

**Grazing Land** – land on which the existing vegetation is suited to the grazing of livestock.

#### California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) allows local governments to enter into contracts with private landowners for the purpose of preventing conversion of agricultural land to non-agricultural uses (DOC 2019). In exchange for restricting their property to agricultural or related open space use, landowners who enroll in Williamson Act contracts receive property tax assessments that are substantially lower than the market rate.

### ***Local Laws, Regulations and Policies***

#### East County Area Plan

The *East County Area Plan*, a component of the Alameda County General Plan, designates the Alameda watershed lands into the following zones: Water Management, Resource Management, and Parklands (Alameda County Community Development Agency Planning Department 1994). The Proposed Project is located within the Water Management and Resource Management zones.

### 3.2.2 Environmental Setting

The Proposed Project is located on lands designated as Grazing Land (DOC 2018). A portion of the Project area is subject to Williamson Act contracts and designated as Williamson Act- Non-Prime Agricultural Land according to production and economic criteria (DOC 2015). There is no forest land on or near the Project area.

### 3.2.3 Discussion of Checklist Responses

***a-e. Convert Important Farmland; Conflict with Existing Zoning, Williamson Act Contract, or Forest Land or Timberland Zoning; Convert Forest Land; or Result in Other Changes That Could Convert Farmland or Forest — No Impact***

The Project area is located on land designated as Grazing Land according to the FMMP (DOC 2018) and a portion of the Project area is designated as Williamson Act- Non-Prime Agricultural Land (DOC 2015). Project construction activities would be confined to the Vallecitos Channel, the ACWD's access road, and three private driveway entrances that would be used for temporary access. These activities would not convert farmland or forest land, nor would it conflict with existing zoning, Williamson Act contracts, or alter land use designations or farmland/timberland classifications at either the local or state level. During construction, temporary perimeter fencing would be installed around the Project's construction footprint which would keep out cattle from the work areas. In addition, operation and maintenance of the Proposed Project would not result in farmland or forest conversion and would not affect existing grazing practices. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, forest lands, or lands under a Williamson Act contract would be converted by, or conflict with, Proposed Project activities. As a result, **no impact** would occur.

*This page intentionally left blank*

### 3.3 Air Quality

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
When available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.3.1 Regulatory Setting

##### ***Federal and State Laws, Regulations and Policies***

The Clean Air Act (CAA) is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, known as the National Ambient Air Quality Standards (NAAQS), for seven criteria pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM<sub>10</sub>), particulate matter of aerodynamic radius of 2.5 micrometers or less (PM<sub>2.5</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), ground-level ozone (O<sub>3</sub>), and lead. Of these criteria pollutants, particulate matter and ground-level ozone pose the greatest threats to human health.

The CARB sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride.

The Proposed Project is located in Alameda County, which is within the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) manages air

quality in the basin for attainment and permitting purposes. The SFBAAB is currently in non-attainment of the state and federal ozone standard, state PM10 standards, and state and federal PM2.5 standards. The SFBAAB is in attainment or unclassified for all other pollutants. The CAA and the California Clean Air Act require areas that are designated nonattainment to reduce emissions until federal and state standards are met.

### Toxic Air Pollutants

The USEPA and CARB regulate various stationary, area, and mobile sources of toxic air pollutants. The USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), also known as hazardous air pollutants (HAPs) at the federal level. In addition, the USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles.

### *Corporate Average Fuel Economy Standards*

The USEPA and National Highway Traffic Safety Administration (NHTSA) set standards for passenger cars and light trucks for the Corporate Average Fuel Economy (CAFE) standards and greenhouse gas (GHG) emissions standards. In March 2020, NHTSA and the USEPA revised these standards under the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule which increases the stringency of fuel economy and carbon dioxide standards by 1.5% in stringency each year for model years 2021 through 2026. This is less than previous standards issued in 2012 which would have had an increase of about 5% per year. The USEPA has granted the CARB permission to establish emission for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger-vehicle fuel specifications. Airborne toxic control measures (ATCMs) are implemented to address sources of TACs.

### *In-use Off-road Diesel Vehicle Regulation*

In 2007, CARB adopted a regulation to reduce diesel particulate matter (DPM) and oxides of nitrogen (NOx) emissions from in-use, off-road, heavy-duty diesel vehicles in California. The regulation imposes limits on vehicle idling and requires fleets to reduce emissions by retiring, replacing, repowering, or installing exhaust retrofits to older engines. In December 2011, the regulation was amended to modify the compliance dates for performance standards and establish requirements for compliance with verified diesel emission control strategy technologies that reduce PM and/or NOx emissions.

### *Truck and Bus Regulation*

In 2008, CARB approved a regulation to substantially reduce emissions of DPM, NOx, and other pollutants from existing on-road diesel vehicles operating in California. The regulation requires affected trucks and buses to meet performance standards and requirements by 2023. Affected vehicles included on-road, heavy-duty, diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds. The regulation was updated in 2011 and 2014 to provide more compliance flexibility and reflect the impact of the 2008 economic recession on vehicle activity and emissions. Heavy-duty trucks used for project construction activities would be required to comply with this regulation.

### *Airborne Toxic Control Measures*

CARB regulates TACs by requiring implementation of various ATCMs, which are intended to reduce emissions associated with toxic substances. The following ATCMs may be relevant to the Proposed Project.

- ATCM to Limit Diesel-fueled Commercial Motor Vehicle Idling
- ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater
- ATCM for Stationary Compression Ignition Engines
- ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines – Standards for non-vehicular Diesel Fuel.

### ***Local Laws, Regulations and Policies***

BAAQMD has adopted several air quality improvement plans, as required by state and federal regulations, to ensure progress in attaining and maintaining the NAAQS and California Ambient Air Quality Standards (CAAQS). These plans are described below.

#### Bay Area 2010 Clean Air Plan

BAAQMD adopted the *Bay Area 2010 Clean Air Plan (CAP)* (BAAQMD 2010) to improve Bay Area air quality and meet public health goals. More specifically, the control strategy described in the 2010 CAP is designed to reduce emissions and decrease ambient concentrations of harmful pollutants, safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and reduce GHG emissions to protect the climate.

The 2010 plan addresses four categories of pollutants: (1) ground-level ozone and its key precursors, reactive organic gases (ROG) and NO<sub>x</sub>; (2) particulate matter, primarily PM<sub>2.5</sub>, as well as precursors to secondary PM<sub>2.5</sub><sup>1</sup>; (3) airborne toxic contaminants; and (4) GHGs. The control strategy in the 2010 CAP describes measures that address or control stationary sources, transportation, mobile sources, land use and local impacts, energy and climate, and further study measures to reduce air pollutants (BAAQMD 2010).

#### 2017 Clean Air Plan

The 2017 CAP updates the 2010 CAP and provides a regional strategy to protect public health and protect the climate (BAAQMD 2017a). The 2017 CAP includes a wide range of control

---

<sup>1</sup> PM includes all particles that are suspended in the air. PM is both directly emitted (referred to as direct PM or primary PM) and also formed in the atmosphere through reactions among different pollutants (referred to as indirect or secondary PM).

measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as PM, O<sub>3</sub>, and TACs; reduce emissions of methane and other “super-GHGs” that are potent climate pollutants in the near term; and decrease emissions of carbon dioxide (CO<sub>2</sub>) by reducing fossil fuel combustion.

#### Particulate Matter Plan

To fulfill federal air quality planning requirements, the BAAQMD adopted a PM<sub>2.5</sub> emissions inventory in 2010. This was transmitted to CARB for inclusion in the California State Implementation Plan (SIP). The BAAQMD also produced an informational report entitled *Understanding Particulate Matter: Protecting Public Health in the San Francisco Bay Area* to help guide ongoing efforts to analyze and reduce PM in the Bay Area (BAAQMD 2012). The 2010 and 2017 CAPs contain multi-pollutant approaches that include several measures for reducing PM emissions in the Bay Area.

In January 2013, the USEPA issued a final rule determining that the San Francisco Bay Area has attained the 24-hour PM<sub>2.5</sub> NAAQS; this action suspended federal SIP planning requirements for the Bay Area (BAAQMD 2020). However, until submittal of a redesignation request and a maintenance plan to the USEPA, the area remains designated as non-attainment.

#### BAAQMD CEQA Significance Thresholds

The CEQA Guidelines recommend that criteria established by the local air district should be relied upon to make determinations of significance regarding air quality impacts. The BAAQMD has developed CEQA guidelines to assist local jurisdictions in evaluating potentially adverse impacts on air quality. The most recent CEQA Guidelines (BAAQMD 2017b) were used to identify the thresholds provided in **Table 3-1**. The BAAQMD uses daily and annual emissions values for construction- and operational-related thresholds. The Proposed Project’s daily emissions were compared against BAAQMD’s mass emission thresholds. The BAAQMD recommends implementing best management practices (BMPs) for all projects to reduce fugitive dust emissions. With implementation of fugitive dust BMPs, BAAQMD considers the impact of fugitive dust emissions to be less than significant. The BAAQMD has also established screening criteria that specify an acceptable distance between sensitive receptors and common sources of odors, such as landfills and wastewater treatment plants. BAAQMD specifies that an odor source with five or more confirmed complaints per year averaged over 3 years would be considered to have a significant impact on receptors within the screening distance. BAAQMD acknowledges that a lead agency has discretion under CEQA to use other established odor detection thresholds or other significance thresholds for CEQA review.

**Table 3-1. BAAQMD Air Quality Thresholds of Significance**

<b>Pollutant</b>	<b>Daily Emissions (pounds per day)</b>	<b>Annual Emissions (tons per year)</b>
ROG	54	10
NOx	54	10
PM10 (Exhaust)	82	15
PM2.5 (Exhaust)	54	10
PM10/PM2.5 (Fugitive Dust)	BMPs	None
Local CO	None	None

*Source: BAAQMD 2017b.*

#### East County Area Plan

The East County Area Plan (Alameda County Community Development Agency Planning Department 1994) contains the following objectives, policies, and actions that may be relevant to the Proposed Project:

**Goal:** To ensure that air Pollution levels do not threaten public health and safety, economic development, or future growth.

**Policy 291:** The County shall strive to meet federal and state air quality standards for local air pollutants of concern. In the event that standards are exceeded, the County shall require appropriate mitigation measures on new development.

**Policy 292:** The County shall coordinate subregional air quality planning and mitigation among East County cities using the results of the biennial monitoring report.

**Policy 293:** The County shall support the Bay Area Air Quality Management District (BAAQMD) in monitoring air pollutants of concern on a continuous basis.

**Policy 296:** The County shall review the cumulative impact of proposed projects for their potential effect on air quality conditions.

**Policy 297:** The County shall coordinate air quality planning efforts with other local, regional and state agencies.

**Policy 298:** The County shall address air quality as a factor in its Regional Element to assist cities in their environmental review procedures.

**Policy 300:** The County shall review proposed projects for their potential to generate hazardous air pollutants.

**Policy 303:** The County shall incorporate the provisions of the Association of Bay Area Government's (ABAG) Bay Area Air Quality Plan and the Bay Area Air Quality Management District's (BAAQMD) Air Quality and Urban Development Guidelines into project review procedures.

**Policy 304:** The County shall notify cities and the Bay Area Air Quality Management District (BAAQMD) of proposed projects which may significantly affect air quality.

**Policy 305:** The County shall cooperate with the BAAQMD and California Air Resources Board in their enforcement of the provisions of the Clean Air Act, state and regional policies, and established standards for air quality.

### 3.3.2 Environmental Setting

The Project site is located in the SFBAAB in the unincorporated Alameda County south of SR-84 and north of San Antonio Reservoir in the Livermore Valley. Winter minimum temperatures average some ten degrees lower than on the coast. At the National Weather Service station, maximum temperatures range (in degrees Fahrenheit [°F]) from the high 50s to the low 60s while minimum temperatures are from the mid to high 30s with extremes in the high teens and low 20s. The mean annual precipitation is 14 inches. At the National Weather Service station, maximum temperatures range from the high 80s to the low 90s with extremes in the 100s, while minimum temperatures are in the low 50s.

Ozone and fine particle pollution, or PM<sub>2.5</sub>, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution is a problem in the winter. Eastern Alameda County has the highest ozone levels in the Bay Area, with summer afternoon temperatures frequently approaching triple digits, spurring ozone levels to exceed health standards. In winter, PM<sub>2.5</sub> can be transported westward through the Altamont Pass from the Central Valley where it adds to wood smoke levels, causing health standards to be exceeded.

The surrounding area has a few rural residences located near the Project's temporary access roads and are located between SR-84 and the Vallecitos Channel. A paintball facility is located adjacent to Vallecitos Channel at the western end of the Project area. The closest resident to a Project area is about 75 feet to the nearest temporary access road and about 1,400 feet from the nearest channel work area. The paintball facility is located within 50 feet of the channel work area.

### 3.3.3 Discussion of Checklist Responses

#### ***a. Conflict with or Obstruct Implementation of the Applicable Air Quality Plan — Less than Significant***

Under CEQA, a project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in the applicable air quality plan, which, in turn, would generate emissions not accounted for in the applicable air quality plan's emissions budget. Therefore, projects are evaluated to determine whether they would generate population and employment growth and, if so, whether that growth would exceed the growth rates included in the relevant air quality plans. The Proposed Project would not involve the construction of any residential, commercial, or industrial structures that would generate population and/or long-term employment growth.

The Proposed Project is located within the SFBAAB and Alameda County. The SFBAAB, including Livermore Valley, is a state and federal non-attainment area for O<sub>3</sub> and PM<sub>2.5</sub> and a state nonattainment area for PM<sub>10</sub>. BAAQMD's Final 2017 CAP, titled *Spare the Air, Cool the Climate*, describes how BAAQMD will reduce emissions of TACs and continue to make progress toward attaining state and federal air quality standards (BAAQMD 2017a). These proposed measures include controlling PM emissions from paving operations, fugitive dust, trackout during construction, and bulk material handling and transport. The East County Area Plan contains goals and policies to protect local air quality and limit emissions of air pollutants. Specific policies related to protecting air quality include requiring project applicants to develop and implement a construction-period air pollution control plan that is consistent with the dust and emission abatement actions in the BAAQMD's *CEQA Air Quality Guidelines* (BAAQMD 2017b).

The Proposed Project would be in compliance with these policies because ACWD has committed to implementing BMP-6, Dust Management Controls and Air Quality Protection, which implements the BAAQMD's Basic Construction Mitigation Measures to reduce emissions of fugitive dust and equipment exhaust. The Proposed Project would not conflict with or impair implementation of applicable air quality plans established by the BAAQMD or local general plans. Because the Proposed Project would not generate growth or conflict with the applicable policies from the BAAQMD air quality plan (BAAQMD 2017a) and the County's Area Plan (Alameda County Community Development Agency Planning Department 1994), the impact related to inconsistency with air quality planning would be **less than significant**.

#### ***b. Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Proposed Project Region is a Nonattainment Area — Less than Significant with Mitigation***

During construction of the Proposed Project, the combustion of fossil fuels for operation of construction equipment, sediment/material hauling, and worker trips would result in construction-related emissions of criteria air pollutants. In addition, construction activities would generate fugitive dust from grading and excavation activities as well as travel on unpaved roads. The Proposed Project's criteria air pollutant emissions during construction were modeled

using conservative assumptions for equipment use, scheduling, and haul routes, as detailed in **Appendix C, Air Quality and Greenhouse Gas Emission Calculations**. Emissions were estimated using the California Emission Estimator Model (CalEEMod) version 2016.3.2. Based on the information provided in Chapter 2, *Project Description*, modeling inputs assumed 13 weeks of construction activities and assumed that, during the earthwork phase, two separate construction crews could be working at the same time. Modeled emissions are shown in **Table 3-2**.

**Table 3-2. Estimated Criteria Pollutant Emissions for the Proposed Project**

	Pollutant						
	ROG	NOx	CO	PM10 Exhaust	PM10 Fugitive	PM2.5 Exhaust	PM2.5 Fugitive
<i>Unmitigated Construction (lb/day)</i>							
Unmitigated Project Construction Maximum Daily Emissions – 2021 (lbs/day)	7.3	72.7	48.9	2.4	171.3	2.2	17.9
BAAQMD Daily Emissions Threshold (lbs/day)	54	54	None	82	BMPs*	54	BMPs*
Exceed Threshold?	N	Y	N	N	N	N	N
<i>Mitigated Construction (lb/day)</i>							
Mitigated Project Construction Maximum Daily Emissions -2021 (lbs/day)	4.4	43.4	63.7	1.3	171.3	1.2	17.9
Exceed Threshold?	N	N	N	N	N	N	N
<i>Project Operation (tons per year)</i>							
Project Operation Emissions (tons/year)	0.004	0.37	0.046	0.012	0.002	0.002	0.001
BAAQMD Annual Emissions Threshold (tons/year)	10	10	None	15	None	10	None
Exceed Threshold?	N	N	N	N	N	N	N

Note: lb/day = pounds per day.

\* BMPs indicates that no calculation is required because compliance with BMPs is considered by BAAQMD to reduce the emission to below the threshold.

Operational criteria air pollutant emissions would be generated by periodic maintenance-related vehicle trips to the site and periodic use of construction equipment (excavator, pump, haul truck) to remove accumulated sediments. Maintenance-related emissions were quantified

using CalEEMod version 2016.3.2, and details are provided in Appendix C. Modeling inputs assumed up to 12 worker trips and two hauling trips per year, as well as the use of small landscaping equipment up to 1,000 hours per year. Operational emissions are provided in Table 3-2.

The BAAQMD has established mass emission thresholds and rules regarding emissions of pollutants. The BAAQMD considers that, if the emissions from a project do not exceed its air quality emission thresholds, the project's emissions are not cumulatively considerable. As shown in Table 3-2, the estimated construction-related emissions associated with the Proposed Project would be greater than these mass emissions significance thresholds for NO<sub>x</sub>. Construction emissions, in particular fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions, would be controlled by implementation of BMP-6 and would meet the BAAQMD requirements for fugitive dust BMPs. In order to reduce daily emissions of NO<sub>x</sub>, **Mitigation Measure AQ-1** would be implemented to ensure that NO<sub>x</sub> emissions levels would be below the BAAQMD daily mass emission threshold. Implementation of BMP-6 and Mitigation Measure AQ-1 would reduce emissions of NO<sub>x</sub> and other criteria pollutants by minimizing idling times of construction equipment, ensuring that all equipment is properly maintained and tuned in accordance with manufacturer's specifications, and requiring the use of fewer pieces of equipment per day or newer model year equipment. As shown in Table 3-2, with implementation of Mitigation Measure AQ-1, it is feasible to reduce emissions to be less than 54 pounds of NO<sub>x</sub> daily. This was demonstrated by assuming that dump trucks during the earthwork phase would be the equivalent of those classified as "Off-Road Tier 4 Final Requirements or Better." It should be noted that there are other ways that the performance threshold of Mitigation Measure AQ-1 may be met, such as by using fewer pieces of equipment, having a longer construction duration and thus reduced daily emissions, using alternative fuel-powered equipment, or using other equipment with newer model engines. Therefore, the impact of criteria pollutant emissions during construction would be **less than significant with mitigation**. The Proposed Project would not contribute substantially to an air quality violation and Project-related emissions would not be cumulatively considerable.

#### **Mitigation Measure AQ-1: Reduce NO<sub>x</sub> Emissions**

Prior to construction, ACWD and/or its contractor(s) shall prepare and implement a NO<sub>x</sub> emissions reduction plan to ensure that NO<sub>x</sub> daily emissions are below 54 pounds per day. This may be achieved through any combination of the following measures:

- Use newer model year equipment, such as those classified as Off-Road Tier 4 Final Requirements or Better.
- Use newer on-road trucks instead of off-road trucks.
- Restrict number of pieces of equipment working per day.
- Restrict number of crews working at a time to one.
- Extend the construction duration and thereby reduce daily construction emissions.

- Use alternatively fueled equipment.
- Any other measure deemed feasible to meet the performance criteria.

As part of developing this plan, the District or its contractor(s) will conduct additional air quality modeling to confirm that the NO<sub>x</sub> emissions threshold will be met using a combination of the measures listed above.

***c. Expose Sensitive Receptors to Substantial Pollutant Concentrations — Less than Significant***

Construction-related activities could result in the generation of TACs, specifically DPM from off-road equipment exhaust emissions. Due to the variable nature of construction activity, the generation of TAC emissions would be temporary in most cases, especially considering the short amount of time such equipment is typically operated within an influential distance of sensitive receptors. According to the Office of Environmental Health Hazard Assessment (OEHHA), the assessment of cancer risk and chronic non-cancer health impacts is typically based on a 70-year exposure period, and there is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015).

The nearest sensitive receptor is 75 feet from the nearest access road and more than 1,400 feet from the nearest work area. Thus, it is unlikely that residents would be exposed to a substantial level of air pollutants. Visitors to the paintball facility would be nearer (50 feet) to some of the work areas; however, these receptors would likely not be present during the full construction duration and, therefore, the amount of exposure to pollutants would not be substantial. While not necessarily needed to reduce this impact to a level that is less than significant, Mitigation Measure AQ-1 could further reduce exposure of TAC emissions to nearby sensitive receptors depending on which specific NO<sub>x</sub> emissions reduction measures are implemented.

The Proposed Project's construction activities would also result in local emissions of fugitive dust. However, implementation of BMP-2 (Area of Disturbance) and BMP-6 (Dust Management Controls and Air Quality Protection), as part of the Proposed Project would minimize fugitive dust emissions such that they would not be substantial.

For long-term operation and maintenance activities, limited use of construction equipment (excavator, haul truck, pump) could emit DPM. Due to the limited and infrequent use of this construction equipment, the Proposed Project's operational activities would not be anticipated to expose sensitive receptors to substantial DPM concentrations. Therefore, the impact on sensitive receptors from the proposed maintenance activities would be **less than significant**.

Overall, implementation of BMP-2 and BMP-6 would reduce exposure of sensitive receptors to fugitive dust emissions. Due to the distance from proposed construction activities and the nearest residents and because visitors at the paintball facility would have very limited exposure to pollutants generated at the work areas, TAC emissions generated by the Project would not have a substantial effect on sensitive receptors and this impact would be **less than significant**. In addition, while not needed to reduce this impact to a level that is less than significant,

Mitigation Measure AQ-1 could further reduce this impact depending on which NOx reduction measures get implemented.

***d. Result in other emissions adversely affecting a substantial number of people — Less than Significant***

Diesel exhaust from construction activities may generate temporary odors while construction of the Proposed Project is underway. Excavated and recently exposed vegetation, soil, or sediment may contain decaying organic material that may create objectionable odors. Project-related odors due to exposure of organic material are expected to be minimal because of the nature of the alluvial soils in the project reach. Once construction activities have been completed, these odors would cease. Maintenance activities would also generate temporary odors, but the odors would be short-lived and would occur intermittently throughout the project area.

The intensity of the odor perceived by a receptor depends on the distance of the receptor from excavation areas and the amount and quality of the exposed soil or sediment material. The nearest sensitive receptors would include a few rural residences located along access routes, which would be within 1,400 feet of exposed sediment and excavation activity. Sensitive receptors at the paintball facility would be within 50 feet of work areas, but this location would be used intermittently and it is unknown if visitors would be present during activities that may cause odors. Following the completion of excavation activities, exposed sediment and soil in the project area would be revegetated. Impacts related to potential generation of objectionable odors, if any, are thus expected to be temporary and **less than significant**.

*This page intentionally left blank*

### 3.4 Biological Resources

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state HCP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.4.1 Regulatory Setting

Biological resources are regulated by the following federal, state, and local laws and ordinances.

#### ***Federal Laws, Regulations, and Policies***

##### Clean Water Act

Areas meeting the regulatory definition of “waters of the United States” (jurisdictional waters) are subject to the jurisdiction of U.S. Army Corps of Engineers (USACE) under provisions of Section 404 of the 1972 Clean Water Act (Federal Water Pollution Control Act) (CWA) and Section 10 of the 1899 Rivers and Harbors Act (described below). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (e.g., intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, and natural ponds), all impoundments of waters otherwise defined as “waters of the United States,” tributaries of waters otherwise defined as “waters of the United States,” the territorial seas, and wetlands (termed Special Aquatic Sites) adjacent to “waters of the United States” (33 Code of Federal Regulations [CFR], Part 328, Section 328.3). Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987).

Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

Construction activities within jurisdictional waters are regulated by USACE. The placement of fill into such waters must comply with the CWA permit requirements of USACE. Under CWA Section 401, no USACE permit would be effective in the absence of a state water quality certification. The State Water Resources Control Board (SWRCB), together with the state’s nine Regional Water Quality Control Boards (RWQCBs), are charged with implementing water quality certification in California.

Any placement of dredged or fill material within areas defined as waters of the United States (i.e., wetlands and other waters), including the Vallecitos Channel, would require a Section 404 fill discharge permit from the USACE and a Section 401 Water Quality Certification from the San Francisco Bay RWQCB.

##### Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects listed wildlife species from harm or “take,” which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that directly results in death or injury of a listed animal species. An activity can be defined as take even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands or if the project requires a federal action, such as a

CWA Section 404 fill permit from USACE. If take of a federally listed animal species would occur, incidental take approval would be required through either Section 7 or Section 10 consultation with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), as applicable.

#### Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA; 16 U.S. Code (USC) Section 703, Supp. I, 1989) prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The trustee agency that addresses issues related to the MBTA is USFWS. Migratory birds protected under this law include all native birds and certain game birds (e.g., turkeys and pheasants), though most non-native birds are excluded from MBTA protection (USFWS 2005). This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA protects active nests from destruction and all nests of species protected by the MBTA, whether active or not, cannot be possessed. An active nest under the MBTA, as described by the U.S. Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum, is one having eggs or young. Nest starts, prior to egg laying, are not protected from destruction.

All native bird species occurring in the Project area are protected by the MBTA. Proposed Project activities will include measures to avoid take of birds protected by the MBTA.

#### Federal Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668 *et seq.*) makes it unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, or their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbance. Exceptions may be granted by USFWS for scientific or exhibition use, or for traditional and cultural use by Native Americans; however, no permits may be issued for import, export, or commercial activities involving eagles.

### ***State Laws, Regulations, and Policies***

#### Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority comes from the CWA and the State's Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the United States (U.S.). For example, Water Quality Order No. 2004-0004-DWQ states that *shallow* waters of the state include headwaters, wetlands, and riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. In these new guidelines, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The Procedures describe riparian habitat buffers as important resources that may both be included in required mitigation packages for permits for impacts to waters of the state, as well as areas requiring permit authorization from the RWQCBs to impact.

Pursuant to the CWA, and as described above, projects that are regulated by the USACE must also obtain a Section 401 Water Quality Certification (WQC) permit from the RWQCB. This WQC ensures that the proposed project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require WQC even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not, for example for riparian habitats which are buffers to waters of the state. Under the Porter-Cologne, the SWRCB and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters.

Any activities within the Project area that affect waters of the United States or waters of the state would require Section 401 Water Quality Certification and/or Waste Discharge Requirements from the RWQCB. The Vallecitos Channel is considered both waters of the United States and waters of the State.

#### California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code of California [F&G Code], Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species. CDFW regulates activities that may result in "take" of individuals listed under the Act (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California F&G Code. CDFW has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification." If project activities would result in take of a state listed species, an incidental take permit would be required through Section 2081 consultation with the CDFW.

#### California Environmental Quality Act

The California Environmental Quality Act (CEQA) and CEQA Guidelines provide guidance in evaluating impacts of projects to biological resources and determining which impacts would be significant. CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project."

Under CEQA Guidelines Section 15065, a project's effects on biotic resources are deemed significant where the project would:

- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels;
- threaten to eliminate a plant or animal community; or
- reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria that trigger mandatory findings of significance, Appendix G of CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact.

Section 15380(b) of CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in the FESA and the CESA and the section of the California F&G Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either USFWS or CDFW or species that are locally or regionally rare.

CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists." Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review in accordance with CEQA Guidelines Section 15380(b).

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed ranked lists of plant species of concern in California using the California Rare Plant Ranks (CRPRs). Vascular plants included on these lists are defined as follows:

- CRPR 1A: Plants considered extinct
- CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
- CRPR 2: Plants rare, threatened, or endangered in California but more common elsewhere
- CRPR 3: Plants about which more information is needed - review list
- CRPR 4: Plants of limited distribution - watch list

The CRPR listings are further described by the following threat code extensions:

- .1—seriously endangered in California
- .2—fairly endangered in California
- .3—not very endangered in California

Although CNPS is not a regulatory agency and plants on the CRPR lists have no formal regulatory protection, plants appearing on CRPR lists are, in general, considered to meet the CEQA Guidelines Section 15380 criteria and adverse effects on these species may be considered substantial.

### California Fish and Game Code

The California F&G Code includes regulations governing the use of, or impacts on, many of the state's fish, wildlife, and sensitive habitats. CDFW exerts jurisdiction over the bed and banks of rivers, lakes, and streams according to provisions of sections 1601–1603 of the F&G Code. The F&G Code requires a Streambed Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body and for the removal of riparian vegetation.

Certain sections of the F&G Code describe regulations pertaining to certain animal species. For example, F&G Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by CDFW. Raptors (i.e., eagles, falcons, hawks, and owls) and their nests are specifically protected in California under F&G Code Section 3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Non-game mammals are protected by F&G Code Section 4150, and other sections of the code protect other taxa.

Any work within the Vallecitos Channel, including discharging drainage channels, would require a Streambed Alteration Agreement from CDFW in accordance with Section 1602 of the California F&G Code. All native bird species that occur in the Project area are protected by the state F&G Code. Projects may be required to take measures to avoid impacts on nesting birds under California F&G Code Sections 3503, 3513, and 3800. Native mammals and other species in the Project area are also protected by F&G code.

### ***Local Laws, Regulations, and Policies***

Applicable local plans, policies, regulations and ordinances are presented below.

#### East County Area Plan

The *East County Area Plan* guides land use and development in unincorporated Alameda County. Goals and policies related to biological resources and that are applicable to the

Proposed Project include the following (Alameda County Community Development Agency Planning Department 1994):

**Goal:** To preserve a variety of plant communities and wildlife habitat.

**Policy 122:** The County shall encourage that wetland mitigation be consolidated in areas that are relatively large and adjacent to or otherwise connected to open space. To the extent possible, these areas should be included in, adjacent to, or linked through open space corridors with lands designated as "Resource Management" that are managed specifically for the preservation and enhancement of biological resources.

**Policy 123:** Where site-specific impacts on biological resources resulting from a proposed land use outside the Urban Growth Boundary are identified, the County shall encourage that mitigation is complementary to the goals and objectives of the ECAP (East County Area Plan).

**Policy 124:** The County shall encourage the maintenance of biological diversity in East County by including a variety of plant communities and animal habitats in areas designated for open space.

**Policy 125:** The County shall encourage preservation of areas known to support special status species.

**Policy 126:** The County shall encourage no net loss of riparian and seasonal wetlands.

#### East Alameda County Conservation Strategy

The Project site is located within the boundaries of the East Alameda County Conservation Strategy (EACCS). The EACCS was created with the intention to provide a framework to protect, enhance, and restore natural resources in East Alameda County while streamlining the environmental permitting process for development and infrastructure projects. It is not, however, an official Habitat Conservation Plan (HCP). The EACCS was prepared in partnership with various Alameda County agencies, such as the Congestion Management Agency, Waste Management Authority, and Resource Conservation District; CDFW; Cities of Dublin, Livermore, and Pleasanton; East Bay Regional Park District; San Francisco RWQCB; National Resource Conservation Service (NRCS); USFWS; and the Zone 7 Water Agency. The EACCS provides an inventory of biological resources within its study area and describes the requirements of environmental compliance with the federal Endangered Species Act, California Endangered Species Act, CEQA, National Environmental Protection Act, and other applicable laws. It presents mitigation standards that include avoidance and minimization measures and a compensation program to offset impacts from projects in its study area. The "focal" special-status species of the EACCS include 13 wildlife species and six plant species. The EACCS does not directly provide permits for projects; however, the USFWS has developed a Programmatic Biological Opinion for effects on focal listed species of projects that receive CWA Section 404 permits from the USACE.

### Alameda County Tree Ordinance

The Alameda County Tree Ordinance (Chapter 12.11 in the General Ordinance Code) prohibits the removal of protected trees and trees located on property within the County's right-of-way without obtaining a tree removal permit. Trees that are afforded protection under this ordinance include any woody perennial plant with single or multiple trunks which typically develop a mature size of over seven inches in diameter and ten or more feet in height. A tree removal permit would be necessary for excavation adjacent to any protected tree where material damage to the root system would result.

## **3.4.2 Environmental Setting**

Ecologists of H. T. Harvey & Associates (H.T. Harvey) and Horizon Water and Environment (Horizon) conducted multiple biological surveys in 2016, 2018, and 2020. These surveys were conducted to (1) assess existing biotic habitats and general wildlife communities on the Project site; (2) assess the site for its potential to support special-status species and their habitats; and (3) identify potential sensitive habitats (such as waters of the U.S./State and riparian habitat). H.T. Harvey delineated waters of the U.S. within the Project area in February 2016.

For the purposes of this IS/MND, sensitive biological resources include the following:

- plants or animals that are listed as rare, threatened, or endangered or as species of special concern, pursuant to federal or state law (including fully protected and CEQA-relevant species), and habitat essential to federally protected species of plants or wildlife;
- natural communities indicated as rare or threatened by the CNDDDB maintained by CDFW;
- wetlands and streams, and the riparian vegetation surrounding them likely subject to USACE, San Francisco Bay RWQCB, and CDFW jurisdiction; and
- natural resources, communities, and associated buffers protected pursuant to applicable plans, policies, and regulations.

The evaluation of potential impacts of the Project on biological resources is based on information gathered during reconnaissance and focused surveys of the site as well as a review of relevant background information. Biologists reviewed background information from the following sources:

- CNDDDB (CDFW 2021) mapping data (**Figure 3-1** and **Figure 3-2**) of special-status species and sensitive habitat occurrences on the project site, and in the surrounding project region

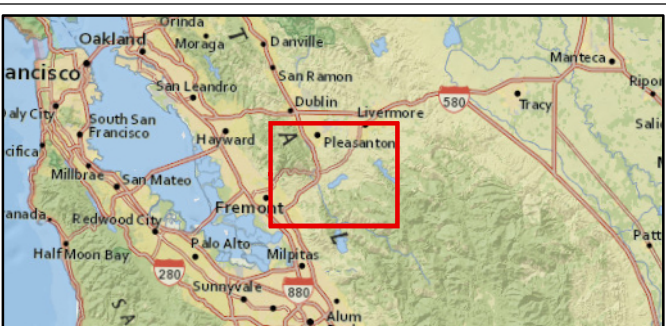
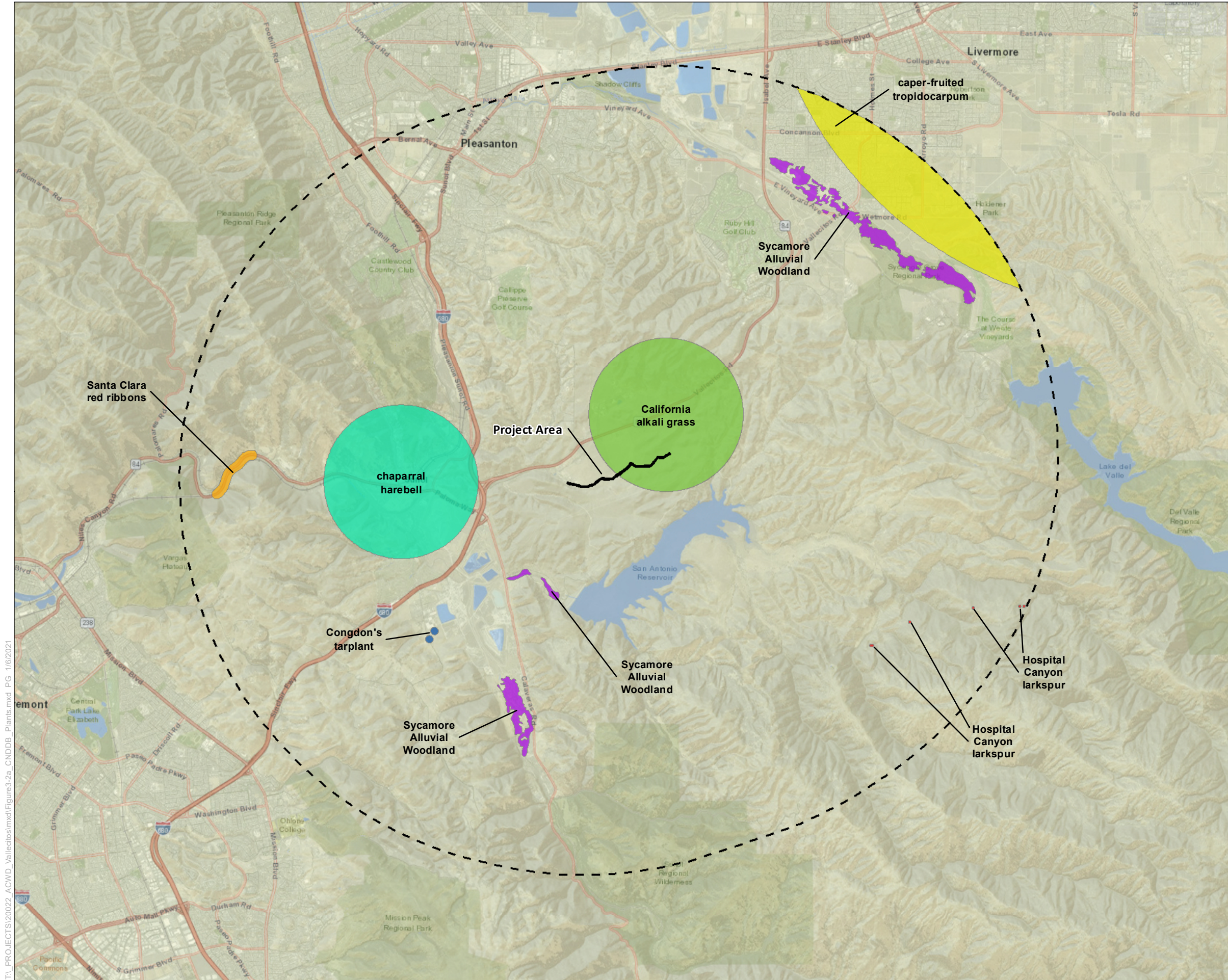
- U.S. Fish and Wildlife List of Federally Endangered and Threatened Species that may Occur in the Proposed Project, and/or may be Affected by the Proposed Project (USFWS 2021; **Appendix D, Biological Resources Information**)
- CNDDDB query of the U.S. Geological Survey (USGS) 7.5-minute *Dublin, La Costa Valley, Livermore, Niles, and Mendenhall Springs* quadrangles (Appendix D)
- CNPS's Inventory of Rare and Endangered Plants of California queries for the USGS 7.5-minute *Dublin, La Costa Valley, Livermore, Niles, and Mendenhall Springs* quadrangles for CRPR 1-4 species, defined as the *Livermore, California* USGS 7.5-minute quadrangle and the surrounding eight quadrangles (CNPS 2021; provided in Appendix D)
- Vallecitos Channel Programmatic Maintenance Project, Biological Resources Report (H.T. Harvey 2016) (**Appendix E**)
- Vallecitos Channel Maintenance Project, Biological Assessment (H.T. Harvey 2021)
- Evaluation of the Potential Historical and Current Occurrence of Steelhead with the Livermore–Amador Valley (Hanson et al. 2004)
- The EACCS (ICF 2010)

The following nine biotic habitats were identified within the Project area, including proposed staging areas and access routes: (1) non-native/ruderal grassland, (2) perennial marsh, (3) mixed perennial marsh and intermittent stream, (4) coyote brush shrubland, (5) intermittent stream with managed flow, (6) mixed riparian woodland, (7) developed, (8) seasonal wetland, and (9) ephemeral drainage. Habitats mapped within the Project area are shown on **Figure 3-3** and the acreages of each habitat type are summarized in **Table 3-3**. Descriptions of these habitat types are included in detail in the *Vallecitos Channel Programmatic Maintenance Project Biological Resources Report* (H.T. Harvey 2016). Sensitive habitats in the Project area that are of limited distribution and/or are particularly important ecologically include, perennial marsh, intermittent stream, mixed perennial marsh and intermittent stream, mixed riparian woodland, and seasonal wetland.

**Table 3-3. Habitat within the Project Area**

Habitat	Area (acres)
Non-native ruderal grassland	8.61
Perennial marsh	2.39
Mixed perennial marsh and intermittent stream	0.93
Coyote brush shrubland	0.62
Intermittent stream, managed flow	0.31
Mixed riparian woodland	0.31
Developed	0.19
Seasonal wetland	0.01
Ephemeral drainage	<0.01
<b>Total</b>	<b>13.38</b>

*Source: H.T. Harvey 2021*



Source: ESRI 2018, CNDDDB 2020

**Project Features**

- Project Limits
- 5-mile Buffer

**Plant Species**

- California alkali grass
- Congdon's tarplant
- Hospital Canyon larkspur
- Santa Clara red ribbons
- caper-fruited tropidocarpum
- chaparral harebell

**Sensitive Natural Community**

- Sycamore Alluvial Woodland



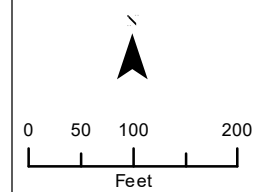
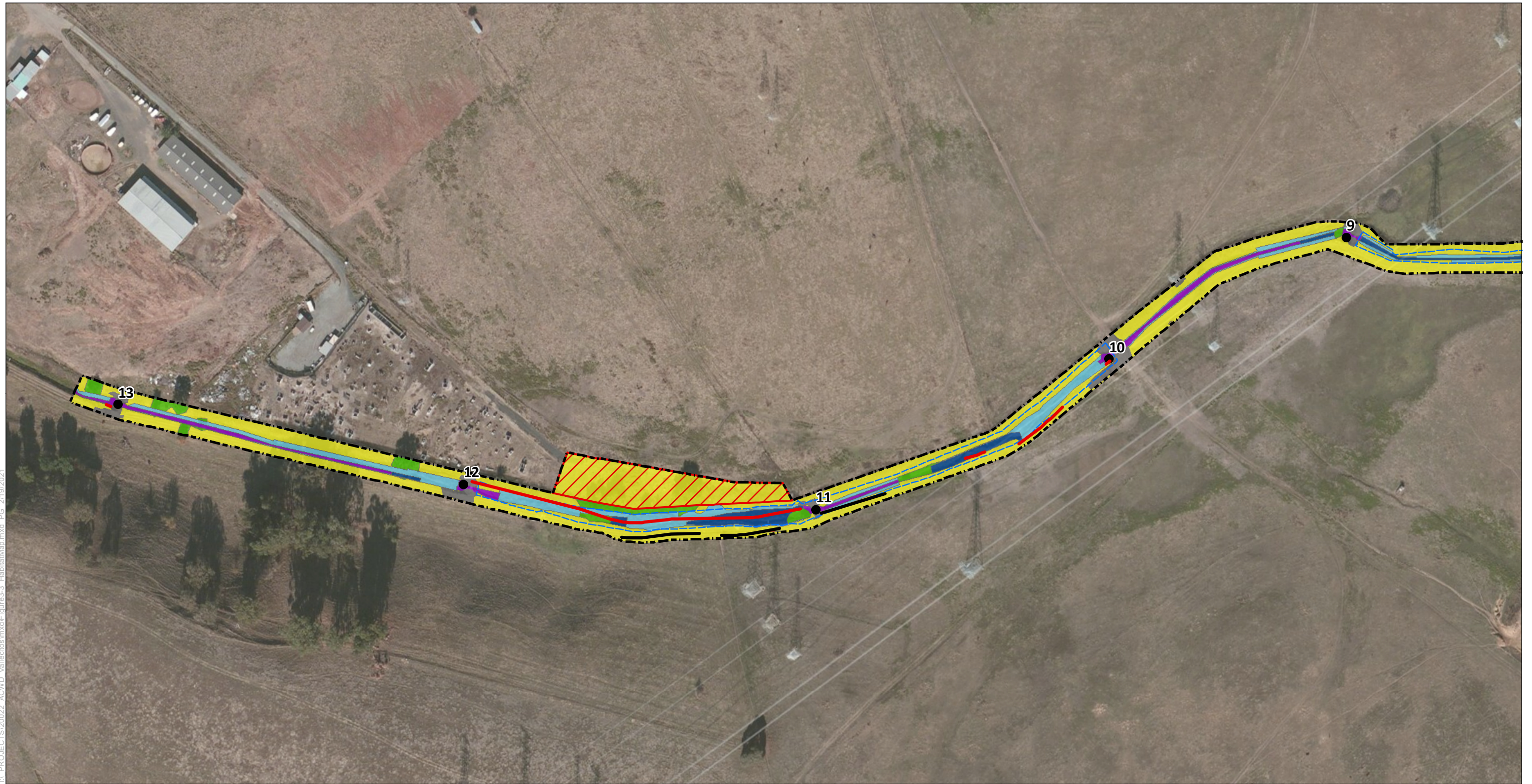
**Figure 3-1**  
CNDDDB Plant and  
Sensitive Natural  
Community Records

*This page intentionally left blank*



*This page intentionally left blank*

T:\PROJECTS\20022 ACWD Vallecitos\mxd\Figure3-3 HabitatMap.mxd PG. 2/19/2021



- Project Boundary
- Top of Bank
- Drop Structure

#### Project Impacts

- Mitigation Areas
- Staging Areas and Road Extensions
- In-Channel Treatments\*
- In-Slope/Out-Slope Road Grading

- Developed
- Intermittent Stream, Managed Flow
- Mixed Perennial Marsh and Intermittent Stream

#### Habitats\*\*

- Mixed Riparian Woodland
- Non-Native/Ruderal Grassland
- Perennial Marsh
- Seasonal Wetland

\*Vegetation Management, Sediment Removal, Full RSP, Toe RSP

\*\*Culverts totaling approximately 0.10 ac of jurisdictional waters are present within various habitat types, but this figure depicts the overlying habitat types in those areas.

**Figure 3-3.**  
Habitat Map

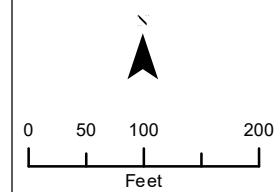
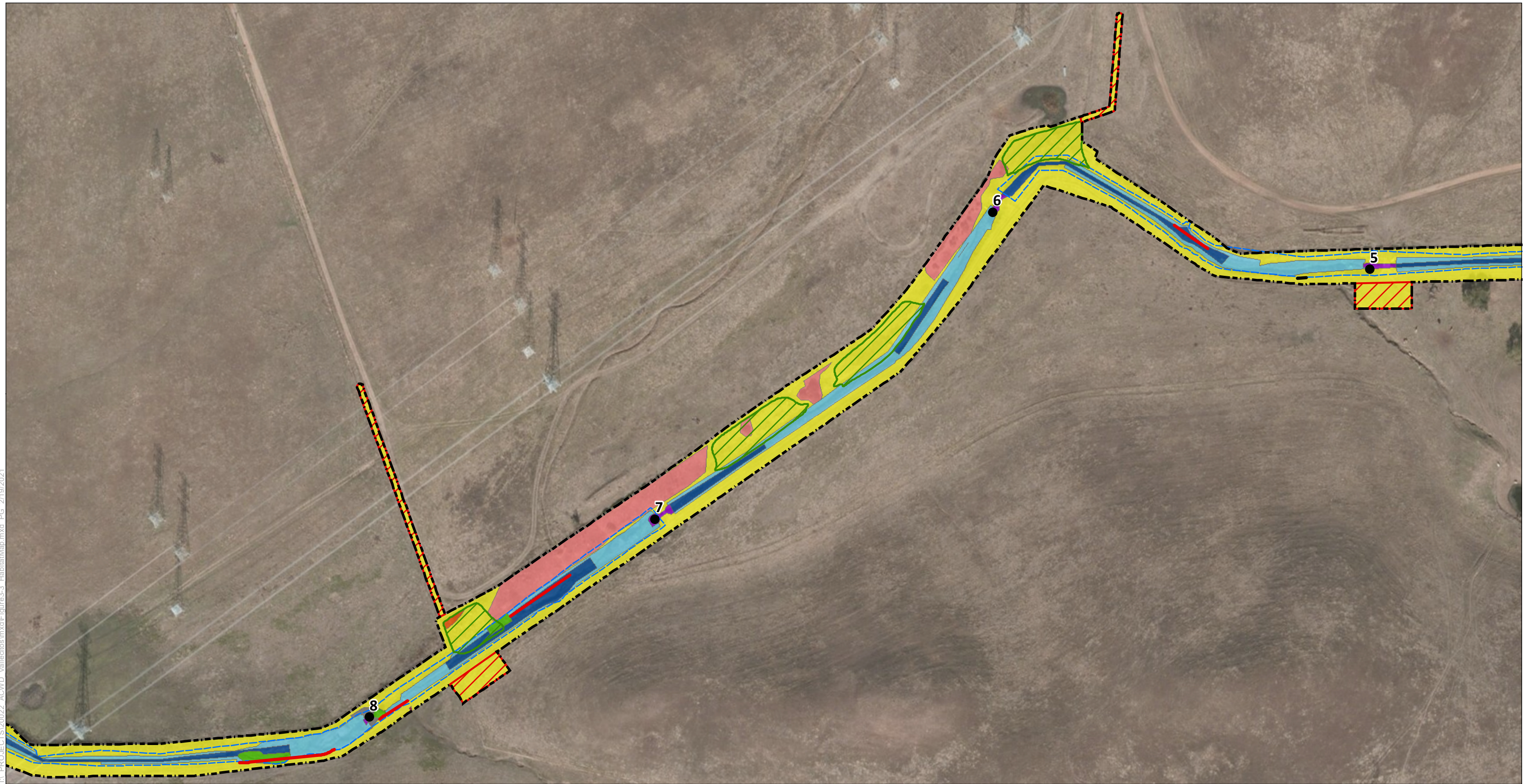
Sheet 1 of 3

Vallecitos Channel  
Maintenance Project



*This page intentionally left blank*

T:\PROJECTS\2022 ACWD Vallecitos\mxd\Figure3-3 HabitatMap.mxd PG. 2/19/2021



- Project Boundary
- Top of Bank
- Drop Structure

- Project Impacts**
- Mitigation Areas
  - Staging Areas and Road Extensions
  - In-Channel Treatments\*
  - In-Slope/Out-Slope Road Grading

- Habitats\*\***
- Coyote Brush Shrubland
  - Developed
  - Ephemeral Drainage
  - Intermittent Stream, Managed Flow

- Mixed Perennial Marsh and Intermittent Stream
- Mixed Riparian Woodland
- Non-Native/Ruderal Grassland
- Perennial Marsh
- Seasonal Wetland

\*Vegetation Management, Sediment Removal, Full RSP, Toe RSP

\*\*Culverts totaling approximately 0.10 ac of jurisdictional waters are present within various habitat types, but this figure depicts the overlying habitat types in those areas.

**Figure 3-3.**  
Habitat Map

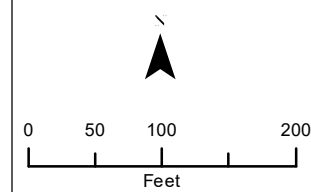
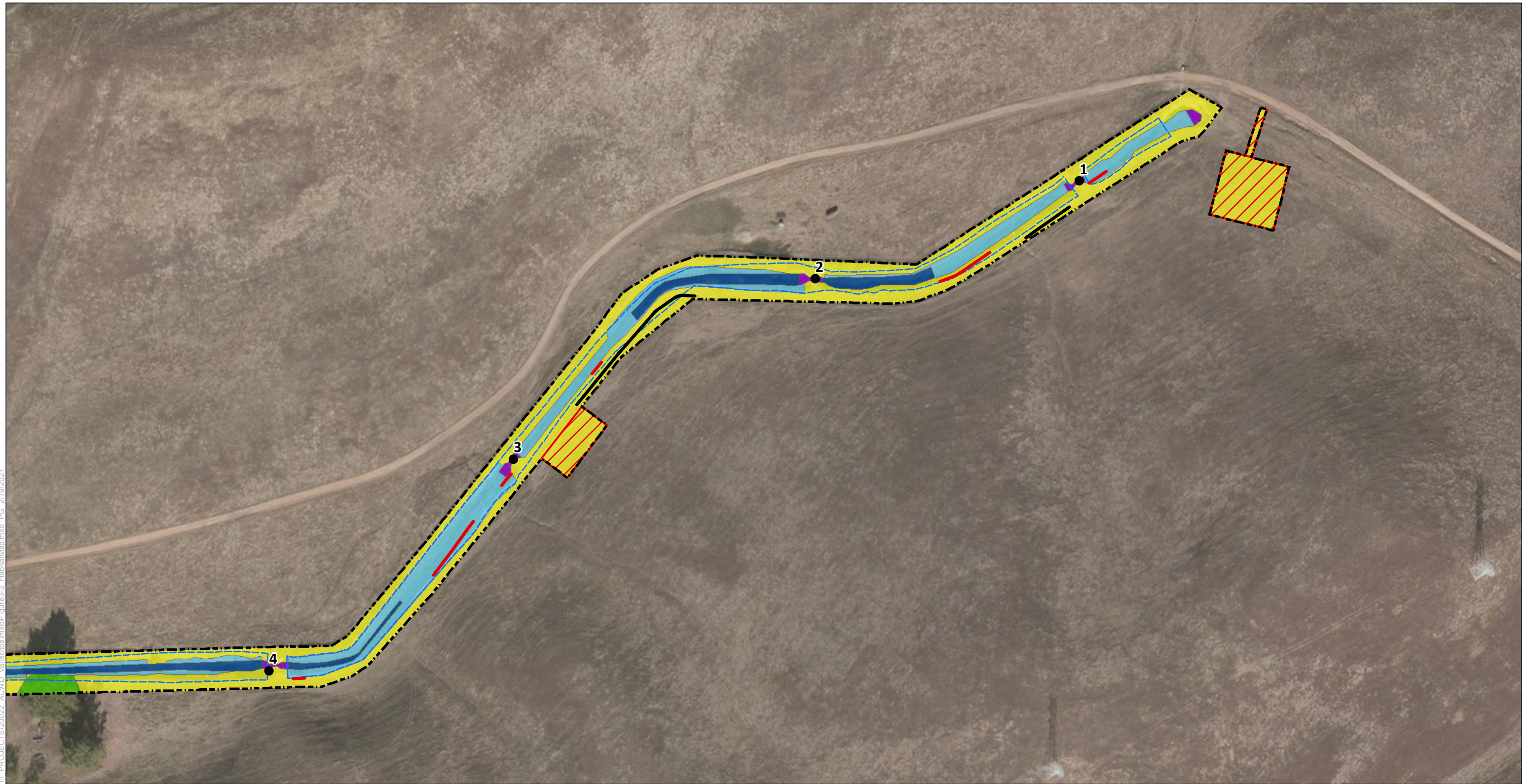
Sheet 2 of 3

Vallecitos Channel  
Maintenance Project



*This page intentionally left blank*

T:\PROJECTS\20022 ACWD Vallecitos\mxd\Figure3-3 HabitatMap.mxd PG. 2/19/2021



- Project Boundary
- Top of Bank
- Drop Structure

#### Project Impacts

- Mitigation Areas
- Staging Areas and Road Extensions
- In-Channel Treatments\*
- In-Slope/Out-Slope Road Grading

#### Habitats\*\*

- Intermittent Stream, Managed Flow
- Mixed Perennial Marsh and Intermittent Stream
- Mixed Riparian Woodland
- Non-Native/Ruderal Grassland
- Perennial Marsh

**Figure 3-3.**  
Habitat Map

Sheet 3 of 3

Vallecitos Channel  
Maintenance Project



*This page intentionally left blank*

### 3.4.3 Discussion of Checklist Responses

***a. Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species — Less than Significant with Mitigation***

Appendix D provides lists of special-status species known to occur in the Project vicinity and considered for this analysis. The potential for each to occur within the Project area was evaluated based on a review of current CNDDDB (CDFW 2021) records, EACCS mapping, and other data sources, coupled with a review of habitat conditions in the Project area and knowledge of species distributions in the Project vicinity. Figure 3-1 shows CNDDDB occurrences of special-status species within 5 miles of the Proposed Project and Figure 3-3 depicts the habitat within the Proposed Project.

A discussion of the Proposed Project's potential effects on special-status species and the resultant level of impacts are provided below.

#### Rare Plants

Sixty-six rare plant species (CRPR 1 and 2 species and in Alameda County CRPR 3 and 4 species) with the potential to occur near the Project area were determined following database queries of the CNPS and CNDDDB (see Appendices D and E). Of these species, 44 were rejected for their potential to occur based on the absence of extant CNDDDB records, the Project being located outside of the species' endemic range, and/or lack of suitable habitat within the Project area. The other 22 special-status plant species were initially thought to have some potential to occur. However, only six of these special-status plant species have been documented by the CNDDDB (CDFW 2021) in the Project vicinity: chaparral harebell (*Campanula exigua*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*), Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*), California alkali grass (*Puccinellia simplex*), and caper-fruited tropidocarpum (*Tropidocarpum capparideum*). The Project area provides potentially suitable habitat for four of the six species documented from CNDDDB records in the site vicinity (Figure 3-3). However, chaparral harebell is not known from elevations and habitats found in the Project area, and caper-fruited tropidocarpum is considered extirpated from Alameda County, so neither of these species is expected to occur on the site (H.T. Harvey 2016).

Protocol-level rare plant surveys conducted over an area encompassing the Project area on February 26, April 28, and July 9 and 22, 2016, detected no rare plant species. Although the target species list was used to focus the surveyors' efforts, the focused surveys were floristic in nature, and aimed to identify every plant found to the level necessary to determine its exact identity and status (typically the species, variety, or subspecies level). As a result, even a non-target special-status plant would have been detected during such surveys (H.T. Harvey 2016). Based on the negative survey results, special-status plants are determined to be absent from the Project area. Thus, special-status plant species would not be affected by Project activities.

### Special-status Wildlife

Based on background information and known distributions and historical CNDDDB occurrences (CDFW 2021), 41 special-status animal species are known to occur in the Project region (see Appendix D). However, 30 special-status wildlife species are not expected to occur in the Project area based on a lack of suitable habitat, barriers to movement from suitable habitat, lack of extant (i.e., still existing) occurrence records, and other factors. Four other species including golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), northern harrier (*Circus cyaneus*), and American peregrine falcon (*Falco peregrinus anatum*), are not expected to nest within the Project area based on the absence of suitable nesting locations.

**Table 3-4** shows the 11 wildlife species with the potential to occur in the Project area. The Project's potential impacts on these 11 wildlife species are described in more detail below.

**Table 3-4. Special-Status Animal Species with Potential to Occur on the Project Site**

Scientific Name	Common Name	Regulatory Status <sup>1</sup>	EACCS Focal Species
<i>Speyeria callippe</i>	Callippe silverspot butterfly	FE	Yes
<i>Ambystoma californiense</i>	California tiger salamander	FT, ST	Yes
<i>Rana draytonii</i>	California red-legged frog	FT, CSSC	Yes
<i>Actinemys marmorata</i>	western pond turtle	CSSC	No
<i>Masticophis lateralis euryxanthus</i>	Alameda whipsnake	FT, ST	Yes
<i>Agelaius tricolor</i>	tricolored blackbird	ST	Yes
<i>Ammodramus savannarum</i>	grasshopper sparrow	CSSC	No
<i>Athene cunicularia</i>	burrowing owl	CSSC	Yes
<i>Elanus leucurus</i>	white-tailed kite	SP	No
<i>Lanius ludovicianus</i>	loggerhead shrike	CSSC	No
<i>Taxidea taxus</i>	American badger	CSSC	Yes

<sup>1</sup>. Key to Abbreviations:

CSSC = California Species of Special Concern

FE = federally endangered

FT = federally threatened

FC = federal candidate

ST = State threatened

SP = State Fully Protected

### *Invertebrates*

Callippe silverspot butterfly is currently known from only four colonies: in the Pleasanton hills north of the Project vicinity (Alameda County), at San Bruno Mountain and Sign Hill near South San Francisco (San Mateo County), at Sears Point (Sonoma County), and in the hills between Vallejo and Cordelia (Solano County). No occurrence records of the species occur within five miles of the Project site (CDFW 2021). The EACCS maps potential habitat for this species within the upper reaches of the Project site (ICF 2010). During protocol-level rare plant surveys, approximately 25 individual Johnny jump-ups (*Viola tricolor*), the butterfly's host plant, were detected approximately 0.8-mile west of the Project site on a north-facing, steep slope. As such, adult Callippe silverspot butterflies may occur in the general vicinity and therefore could occasionally occur on the Project site as a dispersant. However, the species is unlikely to reproduce within the Project area due to the absence of host plants, and it is expected to occur on the Project site very infrequently and in small numbers, if at all (H. T. Harvey 2016, 2021). Based on this information and the limited scale of the Project area, the Proposed Project is expected to have **no impact** on this species or its host plants.

### *Amphibians*

The California tiger salamander is known to occur in the Project vicinity, as there are 54 occurrence records of the species within five miles of the Project site. The nearest occurrence of the species is approximately 800 feet south of the Project site from a 2005 observation and larvae were observed in two stock ponds located approximately 1 mi east of the Project site in 2011 (CDFW 2021). The EACCS maps potential upland habitat for this species within the Project site (ICF 2010). The Project area lacks suitable aquatic breeding habitat as the Vallecitos Channel lacks suitable pools between drop structures and experiences high flow velocities during storm events and routine occurring large pulse flows (during South Bay Aqueduct [SBA] releases) that preclude breeding habitat by this species, which typically breeds in slow-water pools, static vernal pools, or ponds. Although suitable breeding habitat for this species is not present within the Project site, ponds as close as 500 ft from the site provide ostensibly suitable breeding habitat, and a historic breeding pond has been reported approximately 2,500 feet south of the Project site. Therefore, the entire Project site is within the documented dispersal distance for this species (1.3 miles) of known and potential breeding ponds, adult salamanders may move through the site, and a small number of individuals likely use ruderal grasslands on the site as foraging, dispersal, and refugial habitat (H. T. Harvey 2016). Therefore, California tiger salamander has potential to occur on the Project site.

California red-legged frog is also known to occur in the Project vicinity, as there are 30 occurrence records within five miles of the Project site. The nearest occurrence is located approximately 950 feet south of the Vallecitos Channel from a 2003 observation (CDFW 2021). The EACCS maps potential upland/movement habitat for this species within the Project site (ICF 2010). Suitable foraging and dispersal habitat is present throughout freshwater marsh and stream habitats within the channel and several deep pools in the channel may provide suitable breeding habitat when flow conditions in the channel are low. However, high flow conditions in the channel, such as is frequently the case in late spring and summer when drinking water is needed downstream, severely reduce the suitability of potential breeding habitat in the channel

and likely washes amphibian egg masses, and potentially tadpoles, downstream. In addition, the channel supports a large population of large adult bullfrogs (*Lithobates catesbeianus*) that are concentrated in perennial pools downstream of the drop structures during the dry season that would greatly reduce red-legged frog numbers. Although the Vallecitos Channel provides limited breeding habitat, the entire site is within dispersal distance of potential breeding habitat in off-site ponds, and thus, this species may use virtually the entire site during dispersal or refugia (H. T. Harvey 2016).

#### *Potential Impacts to Special-Status Amphibians*

Special-status amphibians could be directly impacted through mortality or injury during ground disturbance and heavy equipment movement or unintentional spills of toxic contaminants. Individuals fleeing noise and vibration disturbance could face increased predation, desiccation, or competition due to overcrowding.

Impacts to habitat for California red-legged frog and California tiger salamander are respectively included in **Tables 3-5** and **3-6** below.

**Table 3-5. Temporary Impact Acreages to Habitat for the California Red-legged Frog within the Proposed Project Footprint.**

<b>Impact Type</b>	<b>Impacted Habitat</b>	<b>Impact Acreage</b>
Vegetation and Sediment Management and Removal	Perennial Marsh, Mixed Perennial Marsh and Intermittent Stream, Mixed Riparian Woodland	0.69
Toe and Full Rock Slope Protection (RSP)	Intermittent Stream, Managed Flow, Perennial Marsh, Mixed Perennial Marsh and Intermittent Stream, Mixed Riparian Woodland	0.13
Construction of in-channel benches	Perennial Marsh, Mixed Perennial Marsh and Intermittent Stream, Mixed Riparian Woodland	0.10
<b>In-channel Dispersal Habitat Impacts Total</b>		<b>0.92</b>
Grading for Staging	Non-native ruderal grassland	1.13
Grading for Extension of Access Roads	Non-native ruderal grassland	0.17
Grading of Access/Maintenance Road	Non-native ruderal grassland	0.16
<b>Upland Dispersal Habitat Impacts Total</b>		<b>1.46</b>
<b>Total Temporary Impacts to California Red-legged Frog Dispersal Habitat</b>		<b>2.38</b>

**Table 3-6. Temporary Impact Acreages to Upland Dispersal Habitat for California Tiger Salamander and Alameda Whipsnake within the Proposed Project Footprint.**

Impact Type	Impacted Habitat	Impact Acreage
Grading for staging	Non-native ruderal grassland	1.13
Grading for extension of access roads	Non-native ruderal grassland	0.17
Grading of access/maintenance road	Non-native ruderal grassland	0.16
Construction of in-channel benches	Non-native ruderal grassland	0.58
Construction of in-channel benches	Seasonal Wetland	0.01
Construction of in-channel benches	Coyote brush shrubland	0.01
<b>Total</b>		<b>2.06</b>

The following Project BMPs (described in Table 2-5 in Chapter 2) would avoid and reduce and/or minimize the potential for impacts to amphibians:

- BMP-1 (Construction Work Windows) seasonally avoids periods of high amphibian movement;
- BMP-2 (Area of Disturbance) minimizes the disturbance area;
- BMP-3 (Erosion and Sediment Control) prevents loss or degradation of uplands and protects water quality;
- BMP-4 (On-site Hazardous Materials Management), BMP-5 (Vehicle Equipment and Maintenance), BMP-8 (Fill, Spoils, and Stockpile Materials) collectively prevent the accidental introduction of harmful substances into suitable habitat;
- BMP-10 (Amphibian Avoidance and Minimization) prevents entrapment and confirms protected amphibian absence before work or operational vegetation removal from suitable habitat begins;
- BMP-11 (Minimize Spread of Weeds and Invasive Species) prevents the degradation of suitable habitat; and
- BMP-13 (Standard Herbicide Use and Application Requirements) prevents the unintended introduction of toxic substances to protected amphibians.

The Proposed Project is expected to obtain incidental take coverage for federally listed species by being appended to the programmatic biological opinion (PBO) of the EACCS (USFWS 2012). As a result, the Project is required to comply with applicable avoidance and minimization measures (AMMs) in the EACCS and the General Minimization Measures (GMMs) of the PBO. These measures would collectively avoid and/or minimize the potential for impacts to individual special-status amphibians. Implementation of **Mitigation Measure BIO-1** would ensure that ACWD's contractor implements applicable AMMs and GMMs in the EACCS and PBO, accordingly. Such measures require that contractor and employees receive an environmental sensitivity training, that vehicles and equipment be refueled over 100 feet away of the channel, grading

activities be minimized to the minimum area necessary, and that a USFWS-approved biological monitor remain on-site during construction activities among other requirements. Adherence to general minimization measures in the EACCS and PBO and above-described BMPs would avoid and/or minimize potential impacts to special-status amphibians. In addition, implementation of **Mitigation Measure HYD-1** would ensure preparation and implementation of a SWPPP which would help protect water quality in the Project work areas and thereby avoid and minimize adverse effects to amphibians. However, sensitive wildlife species may be present in the Project area during construction. Project activities have the potential for take of FESA, CESA, or state-designated sensitive species and may be considered a significant impact. Implementation of **Mitigation Measure BIO-2** would require pre-construction surveys and construction monitoring to detect and avoid sensitive wildlife species, including listed amphibians.

**Mitigation Measure BIO-1. Comply with EACCS Avoidance and Minimization Measures and General Minimization Measures in EACCS Programmatic Biological Opinion**

ACWD and/or its contractor will implement the following measures in the EACCS (ICF 2010) and Programmatic BO for the EACCS (USFWS 2012) to avoid and minimize impacts on Alameda whipsnake, Alameda whipsnake, California red-legged frog, and California tiger salamander.

***EACCS Avoidance and Minimization Measures***

- EACCS Measure GEN-01. Employees and contractors performing construction activities will receive environmental sensitivity training. Training will include review of environmental laws and AMMs that must be followed by all personnel to reduce or avoid effects on covered species during construction activities.
- EACCS Measure GEN-02. Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.
- EACCS Measure GEN-03. Contracts with contractors, construction management firms, and subcontractors will obligate all contractors to comply with these AMMs.
- EACCS Measure GEN-04. The following will not be allowed at or near work sites for covered activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).
- EACCS Measure GEN-05. Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

- EACCS Measure GEN-06. Off-road vehicle travel will be minimized.
- EACCS Measure GEN-07. Vehicles will not exceed a speed limit of 15 mi per hour on unpaved roads within natural land-cover types, or during off-road travel.
- EACCS Measure GEN-08. Vehicles or equipment will not be refueled within 100 ft of a wetland, stream, or other waterway unless a bermed and lined refueling area is constructed.
- EACCS Measure GEN-09. Vehicles shall be washed only at approved areas. No washing of vehicles shall occur at job sites.
- EACCS Measure GEN-10. To discourage the introduction and establishment of invasive plant species, seed mixtures/straw used within natural vegetation will be either rice straw or weed-free straw.
- EACCS Measure GEN-11. Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent covered wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.
- EACCS Measure GEN-12. Erosion control measures will be implemented to reduce sedimentation in wetland habitat occupied by covered animal and plant species when activities are the source of potential erosion problems. Plastic monofilament netting (erosion control matting) or similar material containing netting shall not be used at the Project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- EACCS Measure GEN-13. Stockpiling of material will occur such that direct effects on covered species are avoided. Stockpiling of material in riparian areas will occur outside of the top of bank, and preferably outside of the outer riparian dripline and will not exceed 30 days.
- EACCS Measure GEN-14. Grading will be restricted to the minimum area necessary.
- EACCS Measure GEN-15. Prior to ground disturbing activities in sensitive habitats, Project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.
- EACCS Measure GEN-16. Significant earth-moving activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1 inch of rain or more).

- EACCS Measure GEN-17. Trenches will be backfilled as soon as possible. Open trenches will be searched each day prior to construction to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified biologist.

***PBO General Minimization Measures***

- PBO General Minimization Measure 1. At least 15 days prior to any ground disturbing activities, the applicant will submit to the USFWS for review and approval the qualifications of the proposed biological monitor(s). A qualified biological monitor means any person who has completed at least 4 years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the listed species.
- PBO General Minimization Measure 2. A USFWS-approved biological monitor will remain on-site during all construction activities in or adjacent to habitat for listed species. The USFWS-approved biological monitor(s) will be given the authority to stop any work that may result in the take of listed species. If the USFWS-approved biological monitor(s) exercises this authority, the USFWS will be notified by telephone and electronic mail within one working day. The USFWS-approved biological monitor will be the contact for any employee or contractor who might inadvertently kill or injure a listed species or anyone who finds a dead, injured, or entrapped individual. The USFWS-approved biological monitor will possess a working wireless/mobile phone whose number will be provided to the USFWS.
- PBO General Minimization Measure 3. Prior to construction, a construction employee education program will be conducted in reference to potential listed species on site. At minimum, the program will consist of a brief presentation by persons knowledgeable in endangered species biology and legislative protection (USFWS-approved biologist) to explain concerns to contractors, their employees, and agency personnel involved in the proposed Project. The program will include: a description of the species and their habitat needs; any reports of occurrences in the Project area; an explanation of the status of each listed species and their protection under the Federal Endangered Species Act (FESA); and a list of measures being taken to reduce effects on the species during construction and implementation. Fact sheets conveying this information and an educational brochure containing color photographs of all listed species in the work area(s) will be prepared for distribution to the above-mentioned people and anyone else who may enter the Project area. A list of employees who attend the training sessions will be maintained by the applicant to be made available for review by the USFWS upon request. Contractor training will be incorporated into construction contracts and will be a component of weekly Project meetings.

- PBO General Minimization Measure 4. Pre-construction surveys for listed species will be performed immediately prior to groundbreaking activities. Surveys will be conducted by USFWS-approved biologists. If at any point, construction activities cease for more than 5 consecutive days, additional pre-construction surveys will be conducted prior to the resumption of these actions.
- PBO General Minimization Measure 5. To prevent the accidental entrapment of listed species during construction, all excavated holes or trenches deeper than 6 inches will be covered at the end of each work day with plywood or similar materials. Foundation trenches or larger excavations that cannot easily be covered will be ramped at the end of the work day to allow trapped animals an escape method. Prior to the filling of such holes, these areas will be thoroughly inspected for listed species by USFWS-approved biologists. In the event of a trapped animal is observed, construction will cease until the individual has been relocated to an appropriate location.
- PBO General Minimization Measure 6. Translocation will be approved on a project specific basis. The applicant will prepare a listed species translocation plan for the proposed Project to be reviewed and approved by the USFWS prior to Project implementation. The plan will include trapping and translocation methods, translocation site, and post translocation monitoring. *[Because dewatering will occur as part of the Project, it is possible that California red-legged frogs may be detected during dewatering. If so, they will be captured by a qualified biologist and translocated to suitable habitat outside the impact areas in accordance with the translocation plan described in this measure.]*
- PBO General Minimization Measure 7. Only USFWS-approved biologists will conduct surveys and move listed species.
- PBO General Minimization Measure 8. All trash and debris within the work area will be placed in containers with secure lids before the end of each workday in order to reduce the likelihood of predators being attracted to the site by discarded food wrappers and other rubbish that may be left on-site. Containers will be emptied as necessary to prevent trash overflow onto the site and all rubbish will be disposed of at an appropriate off-site location.
- PBO General Minimization Measure 9. All vegetation which obscures the observation of wildlife movement within the affected areas containing or immediately adjacent to aquatic habitats will be completely removed by hand just prior to the initiation of grading to remove cover that might be used by listed species. The USFWS-approved biologist will survey these areas immediately prior to vegetation removal to find, capture, and relocate any observed listed species, as approved by the USFWS.

- PBO General Minimization Measure 10. All construction activities must cease one half hour before sunset and should not begin prior to one half hour after sunrise. There will be no nighttime construction.
- PBO General Minimization Measure 11. Grading and construction [along streams] will be limited to the dry season, typically May-October.
- PBO General Minimization Measure 12. BMPs will be used to minimize erosion and effects on water quality and effects on aquatic habitat. If necessary, a stormwater pollution prevention plan will be prepared.
- PBO General Minimization Measure 13. The applicant will ensure a readily available copy of this PBO is maintained by the construction foreman/manager on the Project site whenever earthmoving and/or construction is taking place. The name and telephone number of the construction foreman/manager will be provided to the USFWS prior to groundbreaking.
- PBO General Minimization Measure 14. The construction area shall be delineated with high visibility temporary fencing at least 4 ft in height, flagging, or other barrier to prevent encroachment of construction personnel and equipment outside of the construction area. Such fencing shall be inspected and maintained daily until completion of the Project. The fencing will be removed only when all construction equipment is removed from the site.
- PBO General Minimization Measure 16. A USFWS-approved biologist shall ensure that the spread or introduction of invasive exotic plant species shall be avoided to the maximum extent possible. When practicable, invasive exotic plants in the Project areas shall be removed.
- PBO General Minimization Measure 17. Project sites shall be revegetated with an appropriate assemblage of native riparian wetland and upland vegetation suitable for the area. A species list and restoration and monitoring plan shall be included with the Project proposal for review and approval by the USFWS and the USACE. Such a plan must include, but not be limited to, location of the restoration, species to be used, restoration techniques, time of year the work will be done, identifiable success criteria for completion, and remedial actions if the success criteria are not achieved.
- PBO General Minimization Measure 18. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 5 millimeters. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

- PBO General Minimization Measure 19. A USFWS-approved biologist shall permanently remove, from within the Project area, any individuals of exotic species, such as bullfrogs (*Lithobates catesbeiana*), crayfish (*Pacifastacus leniusculus* and *Procambarus clarkia*), and centrarchid fishes, to the maximum extent possible. The applicant shall have the responsibility to ensure that their activities are in compliance with the F&G Code.

#### ***EACCS AMMs Pertaining to Alameda whipsnake***

The following measures are the AMMs prescribed by the EACCS that pertain to the Alameda whipsnake. The description of each measure below is verbatim from the EACCS, except for some measures where italicized text is included in square brackets to indicate more specifically how the Project will implement those measures.

- No monofilament plastic will be used for erosion control.
- Barrier fencing may be used to exclude focal reptiles. Barrier fencing will be removed within 72 hours of completion of work. [*Because Project activities will be temporary in nature, occurring over a period of 12 weeks from late summer into the fall in marginal habitat for the Alameda whipsnake, and because barrier fencing over such a long, linear project site would engender considerable ground disturbance, barrier fencing is not proposed for this Project as described previously.*]
- Construction crews or on-site biological monitor will inspect open trenches in the morning and evening for trapped reptiles.
- Ground disturbance in suitable habitat will be minimized.
- A USFWS and CDFW-approved biological monitor will be present for all ground disturbing activities in suitable habitat.
- A qualified biologist possessing a valid FESA Section 10(a)(1)(A) permit or USFWS approved under an active biological opinion, and approved by CDFW will be contracted to trap and to move reptiles to nearby suitable habitat if listed reptiles are found inside fenced area. [*No trapping, such as the use of upland traplines for Alameda whipsnake, is proposed for this Project. However, a biologist approved by the USFWS under the Project's Biological Opinion and by the CDFW under the Project's ITP will survey for and relocate any individuals found within the impact area. The applicant will prepare a relocation plan for the Project to be reviewed and approved by the USFWS and CDFW prior to the onset of construction.*]
- The following measures are the AMMs prescribed by the EACCS that pertain to the California red-legged frog, and that will be incorporated into the Project. The description of each measure is verbatim from the EACCS, except for some

measures where we have added italicized text in square brackets to indicate more specifically how the Project will implement those measures.

- If aquatic habitat is present, a qualified biologist [*for the California red-legged frog*] will stake and flag an exclusion zone prior to activities. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew). The exclusion zone will encompass the maximum practicable distance from the work site and at least 500 ft from the aquatic feature wet or dry.
- A qualified biologist [*for the California red-legged frog*] will conduct pre-construction surveys prior to activities. If individuals are found, work will not begin until they are moved out of the construction zone to a USFWS/CDFW approved relocation site.
- A USFWS-approved biologist [*for the California red-legged frog*] should be present for initial ground disturbing activities. [*The USFWS-approved biologist will be present during all maintenance and construction activities.*]
- If the work site is within the typical dispersal distance (contact USFWS/CDFW for latest research on this distance for species of interest) of potential breeding habitat, barrier fencing will be constructed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. [*The Project area is known to be within dispersal distance of potential breeding habitat for California red-legged frog. However, because Project activities will be temporary in nature, occurring over a period of 12 weeks from late summer into the fall when frogs are less likely to disperse overland, and be conducted in aquatic dispersal and foraging habitat for the California red-legged frog within the channel (where frogs may already be present), barrier fencing is considered ineffective and unnecessary for this Project.*]
- No monofilament plastic will be used for erosion control.
- Construction personnel will inspect open trenches in the morning and evening for trapped amphibians.
- A qualified biologist possessing a valid FESA Section 10(a)(1)(A) permit or USFWS-approved under an active biological opinion, will be contracted to trap and to move amphibians to nearby suitable habitat if amphibians are found inside a fenced area. [*No trapping, such as the use of upland traplines for California red-legged frogs, is proposed for this Project. However, a biologist approved by the USFWS under the Project's Biological Opinion will survey for and relocate any individuals found within the impact area. The applicant will prepare*

*a relocation plan for the Project to be reviewed and approved by the USFWS prior to the onset of construction.]*

- Work will be avoided within suitable habitat from 15 October (or the first measurable fall rain of 1 inch or greater) to 1 May.

***EACCS AMMs Pertaining to California red-legged frog***

The following measures are the AMMs prescribed by the EACCS that pertain to the Alameda whipsnake. The description of each measure below is verbatim from the EACCS, except for some measures where italicized text is included in square brackets to indicate more specifically how the Project will implement those measures.

- If aquatic habitat is present, a qualified biologist [*for the California red-legged frog*] will stake and flag an exclusion zone prior to activities. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew). The exclusion zone will encompass the maximum practicable distance from the work site and at least 500 ft from the aquatic feature wet or dry.
- A qualified biologist [*for the California red-legged frog*] will conduct pre-construction surveys prior to activities. If individuals are found, work will not begin until they are moved out of the construction zone to a USFWS/CDFW approved relocation site.
- A USFWS-approved biologist [*for the California red-legged frog*] should be present for initial ground disturbing activities. [*The USFWS-approved biologist will be present during all maintenance and construction activities.*]
- If the work site is within the typical dispersal distance (contact USFWS/CDFW for latest research on this distance for species of interest) of potential breeding habitat, barrier fencing will be constructed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. [*The Project area is known to be within dispersal distance of potential breeding habitat for California red-legged frog. However, because Project activities will be temporary in nature, occurring over a period of 12 weeks from late summer into the fall when frogs are less likely to disperse overland, and be conducted in aquatic dispersal and foraging habitat for the California red-legged frog within the channel (where frogs may already be present), barrier fencing is considered ineffective and unnecessary for this Project.*]
- No monofilament plastic will be used for erosion control.

- Construction personnel will inspect open trenches in the morning and evening for trapped amphibians.
- A qualified biologist possessing a valid FESA Section 10(a)(1)(A) permit or USFWS-approved under an active biological opinion, will be contracted to trap and to move amphibians to nearby suitable habitat if amphibians are found inside a fenced area. *[No trapping, such as the use of upland traplines for California red-legged frogs, is proposed for this Project. However, a biologist approved by the USFWS under the Project's Biological Opinion will survey for and relocate any individuals found within the impact area. The applicant will prepare a relocation plan for the Project to be reviewed and approved by the USFWS prior to the onset of construction.]*
- Work will be avoided within suitable habitat from 15 October (or the first measurable fall rain of 1 inch or greater) to 1 May.

#### ***EACCS AMMs Pertaining to California tiger salamander***

The AMMs listed above for California red-legged frog will also be followed for California tiger salamander, with the following specific measures prescribed by the EACCS that pertain to the California tiger salamander, and that will be implemented by ACWD. The description of each measure is verbatim from the EACCS, except for some measures where we have added italicized text in square brackets to indicate more specifically how the Proposed Project will implement those measures.

- A qualified biologist *[for the California tiger salamander]* will conduct pre-construction surveys prior to activities. If individuals are found, work will not begin until they are moved out of the construction zone to a USFWS/CDFW approved relocation site.
- A USFWS/*CDFW*]-approved biologist *[for the California tiger salamander]* should be present for initial ground disturbing activities.
- If the work site is within the typical dispersal distance (contact USFWS/CDFW for latest research on this distance for species of interest) of potential breeding habitat, barrier fencing will be constructed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. *[The Project area is known to be within dispersal distance of potential breeding habitat for California tiger salamander. However, because Project activities will be temporary in nature, occurring over a period of 12 weeks from late summer into the fall when salamanders are less likely to disperse, barrier fencing is considered unnecessary for this Project.]*
- A qualified biologist possessing a valid FESA Section 10(a)(1)(A) permit or USFWS-approved under an active biological opinion, will be contracted to trap and to move amphibians to nearby suitable habitat if amphibians are found inside a fenced area. *[No trapping, such as the use of upland traplines for*

*California tiger salamanders, is proposed for this Project. However, a biologist approved by the USFWS under the Project's Biological Opinion and by the CDFW under the Project's ITP will survey for and relocate any individuals found within the impact area. The applicant will prepare a relocation plan for the Project to be reviewed and approved by the USFWS and CDFW prior to the onset of construction.]*

- Work will be avoided within streams from October 15 (or the first measurable fall rain of 1" or greater), to May 1.

#### **Mitigation Measure BIO-2. Pre-construction Survey(s) and Construction Monitoring for Special Status Wildlife Species**

The following measures shall be implemented to avoid or minimize impacts to special status wildlife species:

The District will require that a qualified biologist(s) survey for special status wildlife species (e.g., California red-legged frog, California tiger salamander, Alameda whipsnake, tricolored blackbird, and western pond turtle) within 7 days prior to the start of ground- or vegetation disturbing work within the channel to verify the presence or absence of special-status wildlife, and nesting birds. All wildlife species observed will be recorded. The results of these surveys will be documented and provided to state and federal regulatory agencies upon request.

During ground-disturbing and vegetation removal activities, a qualified biologist shall be on-site to ensure no impacts to wildlife occur.

If non-sensitive wildlife species are observed within the construction area, wildlife will be allowed to exit the construction area on their own volition or relocated by a qualified biologist to an appropriate site outside the construction area (i.e., upstream or downstream of the activity area).

If sensitive wildlife species or active nest or den sites are found within the construction area, the biologist shall have the authority to stop construction activities and establish a non-disturbance buffer until it is determined that the animal would not be harmed. If the potential to harm sensitive wildlife or an active nest/den site remains, the non-disturbance buffer is to remain and the biologist shall contact CDFW for authorization before work resumes.

As shown in Tables 3-5 and 3-6, the Proposed Project would result in temporary impacts to special-status amphibian habitat and permanent loss through habitat type conversion. The proposed onsite riparian/wetland benches would provide 0.60 acre of compensatory mitigation for the Project's effects on California red-legged frog habitat. However, additional habitat mitigation would be needed to compensate for the Project's residual effects on California red-legged frog habitat as well as the Project's effects on dispersal habitat for California tiger salamander. Therefore, **Mitigation Measure BIO-3** requires compensatory mitigation at a 1:1

ratio in accordance with EACCS to mitigate the habitat impacts through the purchase of credits at a conservation bank in accordance with EACCS.

**Mitigation Measure BIO-3. Provide Compensatory Mitigation for Impacts to California Tiger Salamander, California Red-legged Frog, and Alameda Whipsnake**

The Project will provide 2.38 acres of compensatory mitigation for California red-legged frog in the form of 0.60 acre of onsite conversion of upland ruderal grassland to in-channel riparian habitat and 1.78 ac of credit purchase at a conservation bank. The Project will also provide 2.06 ac of compensatory mitigation for the Alameda whipsnake and California tiger salamander in the form of a 1:1 equivalent credit purchase at a conservation/wetland bank within the EACCS study area (i.e., Ohlone Preserve Conservation Bank or Ohlone West Conservation Bank). Multi-species credits can be purchased where species' habitat overlaps within the Project area. Mitigation credits shall be purchased prior to Project impacts to those species' habitats. In the event that mitigation credits are not available at a conservation/wetland bank within the EACCS study area, the District will purchase credits at a regional conservation/wetland bank, upon approval from USFWS.

Following **Mitigation Measures BIO-1, BIO-2 and BIO-3, and HYD-1**, impacts to special status amphibians and their habitat would be considered **less than significant with mitigation**.

*Reptiles*

Western pond turtles are found in streams, ponds, wetlands, and other drainages and typically nests within 600 feet of aquatic habitat (Jennings and Hayes 2004). This species is known to occur within the Project vicinity with 14 occurrence records within five miles of the Project site (CDFW 2021). The species was also observed in a perennial pond located approximately 1,000 feet south of the Project site and adjacent to the District's access road during the reconnaissance-level surveys conducted in February 2016. There are no barriers to dispersal between that pond and Vallecitos Channel, and therefore pond turtles could move between the pond and the Project site. Western pond turtles could occur on the Project site, in which case nesting could potentially occur on the upland areas located along the channel. However, due to insufficient water depth in the channel, suitable habitat in the Project area is confined to the perennial pools downstream of the drop structures which area considered marginal habitat for this species due to the relatively small pool size and lack of basking sites (H.T. Harvey 2016). Therefore, individual western pond turtles may occur within the Project area during dispersal from other waterbodies but the channel could not sustain a resident population.

The Alameda whipsnake is typically found in open and partially open, low-growing shrub communities, as well as grasslands, oak savanna, and oak-bay open woodlands near coastal sage scrub and chaparral habitats (Swaim 1994). There are six CNDDDB occurrence records of the species within five miles of the Project site, with the nearest record approximately 2.75 miles southeast (CDFW 2021). Though coyote brush shrubland occurs in the Project area (and scrub habitat is considered an essential habitat element for Alameda whipsnake), it is limited to less than an acre in size, and there are no other essential habitat elements for the snake (e.g., rock

outcrops) in the Project site (H.T. Harvey 2021). Further, the coyote brush shrubland habitat is relatively isolated from similar habitat by expansive areas of grassland. The Vallecitos Channel is within a USFWS-designated recovery unit for this species, and critical habitat has been designated within the vicinity of the Project site (Figure 4). In addition, the EACCS maps dispersal habitat for this species along the historic Vallecitos Creek channel, including portions of the Project site (ICF 2010). Therefore, it is possible that individuals of the Alameda whipsnake may occur in the Project site as occasional dispersants. However, this species would occur infrequently and in very low numbers, and they are not expected to utilize the area as more than dispersal habitat due to the marginal quality of the habitat in the Project site for the species and the lack of any known nearby occurrences (H.T. Harvey 2021).

*Potential Impacts to Special-status Reptiles:*

In the unlikely event that western pond turtles or Alameda whipsnake are present during Proposed Project activities, individuals may be harmed or killed due to crushing by personnel or equipment used during construction or operational vegetation removal activities, or as a result of desiccation or burying (e.g., during dewatering, excavation, or grading). Applicable AMMs in the EACCS and the GMMs of the EACCS' PBO (**Mitigation Measure BIO-1**) would collectively avoid and/or minimize the potential for impacts to individual special-status reptiles. In addition, implementation of BMP-10 (Amphibian Avoidance and Minimization), as described in Table 2-5, would prevent entrapment of reptiles, while implementation of **Mitigation Measure BIO-2** would confirm reptile presence or absence prior to construction activities. Further, **Mitigation Measure BIO-3** provides compensatory mitigation for temporary disturbance of Alameda whipsnake habitat.

Therefore, the effects of the Proposed Project on special-status reptiles would be **less than significant with mitigation**.

*Birds*

In the Project area, bald eagles would be absent as a breeder at the Project area but may nest at San Antonio Reservoir and therefore, may occasionally forage near the Project site. Golden eagles have been observed foraging near the Project site but would be absent as a breeder as the Project area lacks suitable nest sites.

Tricolored blackbird is a California species of special concern (at its nesting colonies) and forms dense breeding colonies. This species typically nests in tall, dense, stands of cattails or tules, but also nests in blackberry, wild rose bushes, and tall herbs typically near fresh water. Tricolored blackbirds occur in the Project vicinity (CDFW 2021) and numerous individuals were observed perching but not nesting on the marsh vegetation and nearby trees in May 2020. The EACCS maps foraging habitat within the Project site and breeding habitat approximately 1,000 feet south of the site over a small ridge (ICF 2010). Although the perennial marsh habitat on the Project site provides only a narrow strip of marsh vegetation, primarily tule in the channel, more extensive stands of marsh vegetation are located adjacent to the Project site (H.T. Harvey 2016). Therefore, a nesting colony of tricolored blackbird could occur in marsh habitat on the Project

site and/or adjacent to the Project site. However, the Proposed Project would not permanently impact tricolored blackbird or its habitat, while the new riparian/wetland benches would provide additional foraging (and possibly nesting) habitat for this species.

Grasshopper sparrow is known to occur within the Project vicinity, despite the absence of occurrence records of the species within five miles of the Project site (CDFW 2021). Nesting grasshopper sparrows likely occur in open grassland habitats in the Project vicinity and may occasionally occur in the Project site. Short, low-growing vegetation on the Project site may provide suitable nesting habitat for this species, particularly in the adjacent uplands. However, it is more likely that nesting grasshopper sparrows use the large and unfragmented grassland habitats located to the east and south of the Project site, and occasionally forage in the Project site in low numbers (H.T. Harvey 2016). While the species has a higher likelihood to occur in larger, less fragmented habitat outside of the Project site, there is potential for this species to occur within the Project area. Grassland habitats disturbed by the Proposed Project would regenerate within one year.

Burrowing owls prefer annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, burrowing owls are found in close association with California ground squirrels; owls use the abandoned burrows of ground squirrels for shelter and nesting. EACCS maps suitable habitat for this species within the Project site and surrounding areas (ICF 2010). No occurrence records of the species are known from within five miles of the Project site (CDFW 2021), but a burrowing owl was observed using a burrow located adjacent to the District's access road, approximately 1,200 feet south of the Project site during 2016 reconnaissance-level surveys (H.T. Harvey 2016). Suitable habitat for burrowing owls occurs in ruderal grassland areas on the Project site, where numerous California ground squirrel burrows occur in upland areas along the channel. Therefore, burrowing owls could breed and roost on the Project site in low numbers, and individuals likely also occur on the site as foragers (H.T. Harvey 2016). Suitable burrowing sites and grassland habitats disturbed by the Proposed Project would regenerate within one year of project construction activities.

White-tailed kite, a California fully protected species, is known to occur in the Project vicinity (CDFW 2021) and suitable habitat for this species occurs on the Project site. White-tailed kites could nest in trees or shrubs within woodland habitats on the Project site, and the extensive open grasslands located adjacent to the site, particularly to the south and east, provide high quality foraging habitat. Therefore, individuals may occasionally occur on the Project site as foragers or breeders. However, only one or two pairs of this species, at most, could nest on the Project site due to the narrow width of the Project site and the species' territorial nature (H.T. Harvey 2016).

Loggerhead shrike breeds in a number of locations in the Project region where open grassland, ruderal, or agricultural habitat with scattered brush, chaparral, or trees that provide perches and nesting sites occurs. No occurrence records of the species occur within five miles of the Project site (CDFW 2021), but evidence of shrike occurrence (i.e., prey items cached on a barb wire fence) was observed during reconnaissance-level surveys, and it is possible that one or two pairs may nest and forage on or adjacent to the site (H.T. Harvey 2016). The Project site provides

suitable habitat in the form of trees and shrubs that provide potential nesting sites interspersed with, and adjacent to, extensive open foraging habitat. Therefore, loggerhead shrike is expected to occur within the Project site.

In addition to the above discussed bird species, several common passerine species and raptors (e.g., red-tailed hawk [*Buteo jamaicensis*] and red-shouldered hawk [*Buteo lineatus*]) are known to forage within the Project area and may nest within and near the Project area.

*Potential Impacts to Special-Status Birds:*

Proposed Project activities will avoid take of eagles, as defined by the Bald and Golden Eagle Protection Act, due to the absence of suitable nesting sites in the Project vicinity, and the Proposed Project would have a less than significant impact on eagles.

Project construction activities may result in the temporary loss of suitable nesting habitat and could result in the removal of an active special-status bird nest, if present. During construction, the Proposed Project could result in increased disturbance (e.g., noise and vibration) near active nests and potentially result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. In addition to the species' State regulatory statuses and associated protection afforded, the loss of any active nests of protected birds would violate the MBTA and F&G Codes 3503 and 3503.5. Implementation of **Mitigation Measure BIO-4** would ensure that project activities comply with the MBTA and California F&G Code.

**Mitigation Measure Bio-2** would further avoid and minimize potential impacts to nesting birds as pre-construction wildlife surveys would detect and avoid special status bird species and other nesting birds. In addition, **Mitigation Measure BIO-5** is proposed to avoid impacts to burrowing owls, to the extent feasible.

**Mitigation Measure BIO-4. Nesting Bird Avoidance and Minimization**

ACWD will implement the following measures to ensure that project activities comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (F&G Code):

- *Avoidance.* To the extent feasible, construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts on nesting birds protected under the MBTA and F&G Code will be avoided. The nesting season for most birds in Alameda County extends from February 1 through August 31.
- *Preconstruction/Pre-disturbance Surveys.* If it is not possible to schedule construction activities between September 1 and January 31 then preconstruction surveys for nesting birds should be conducted by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. These surveys should be conducted no more than seven days prior to the initiation of construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats in and immediately adjacent to the impact area for nests.

- **Buffers.** If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during Project implementation.

#### **Mitigation Measure BIO-5. Pre-construction Survey(s) for Burrowing Owl**

Within 48 hours prior to initiating ground-disturbing activities, a qualified biologist shall conduct a focused pre-activity survey for burrows occupied by migrant or overwintering burrowing owls. The survey shall be conducted in accordance with protocols established in the *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game [CDFG] 2012 or current version). The qualified biologist shall investigate suitable burrows for signs of owl use and to determine whether owls are present in areas where they could be affected by the proposed activities.

If burrowing owls are detected, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in the *Staff Report on Burrowing Owl Mitigation*, and at the discretion of a qualified wildlife biologist. No ground-disturbing activities shall commence within the buffer area until a qualified biologist confirms that the burrow is no longer occupied.

If impacts on occupied burrows are unavoidable, passive relocation techniques can be used to evict owls from burrows within the work area prior to initiation of ground-disturbing activities. No owls will be evicted during the breeding season (February 1 through August 31) unless a biologist can determine that owls are not actively nesting.

Implementation of Project BMPs and **Mitigation Measures BIO-2, BIO-4 and BIO-5** would avoid take of special-status birds.

Vegetation impacted by Project construction activities would regenerate following Project completion. Impacts to tricolored blackbird habitat (i.e., perennial marsh habitat) would be temporary as in-channel tule would recolonize and regenerate areas where it is removed. In addition, transplanted tule clumps will be installed in the riparian/wetland benches and are designed with a slight depression to increase the hydroperiod and available soil moisture in the center of each bench. These relatively broad riparian/wetland benches are anticipated to support dense emergent vegetation thus providing suitable breeding habitat for tricolored blackbird and would be considered a beneficial impact for the species. Similarly, Project impacts to suitable burrowing owl habitat would be limited to surface grading for staging and laydown areas, temporary construction access, and access road maintenance. These activities and impacts would be temporary in duration and impacted upland habitat would return to pre-Project conditions within one growing season. Impacts to special-status bird species habitat would be considered **less than significant**.

Therefore, potential impacts to special-status bird species and their habitats would be **less than significant with mitigation**.

### *Mammals*

American badger occurs in open grassland and chaparral habitats located to the south and east of the Project site, and was observed in the mixed woodland habitat approximately 1 mile west of the Project site during 2017 reconnaissance surveys. Suitable denning habitat for this species is limited on the Project site due to regular human presence associated with operation of the channel and access road mowing. More extensive foraging habitat and suitable denning habitat for this species are present in adjacent grassland areas. Therefore, individuals of this species may occur as foragers on the Project site occasionally and in very low numbers, although they are not expected to den or breed on the site (H. T. Harvey 2016).

Since American badger is not expected to den in the Project site, Proposed Project activities are not expected to impact active pupping dens. Although unexpected, implementation of **Mitigation Measure BIO-2** would detect potential badger dens within the Project area, if any are present. Implementation of **Mitigation Measure BIO-1** would further avoid and minimize impacts to badgers by implementing applicable AMMs in the EACCS and the GMMs of the EACCS' PBO, specifically preconstruction surveys to confirm protected species absence prior to ground disturbance (PBO GMM-4), covering or installing escape ramps in excavations (PBO GMM-5), and prohibiting the use of monofilament material (PBO GMM 12),. Grassland affected by the Proposed Project would regenerate within one year. Therefore, potential impacts to American badger would be **less than significant with mitigation**.

### Conclusion

The Proposed Project could result in disturbance and take of special-status wildlife species, as well as federally protected species' habitat, which would be a potentially significant impact. However, ACWD would implement **Mitigation Measure BIO-1** which includes complying with numerous BMPs, applicable AMMs in the EACCS, and the EACCS PBO GMMs and would collectively avoid and/or minimize the potential for impacts to individual special-status wildlife species. **Mitigation Measures BIO-2, BIO-4, and BIO-5** require preconstruction surveys for special status wildlife including nesting birds, and **Mitigation Measure BIO-3** requires that the disturbance of federally protected species habitat be compensated at a 1:1 equivalent credit purchase at a conservation/wetland bank within the EACCS study area. Therefore, Proposed Project effects to special-status wildlife species would be **less than significant with mitigation**.

### ***b,c. Have a Substantial Adverse Effect on any Riparian Habitat, Federally Protected Wetlands or Other Sensitive Natural Community — Less than Significant with Mitigation***

#### Construction Impacts to Riparian Habitat, Jurisdictional Wetlands, and Other Sensitive Habitat Types

Sensitive riparian/wetland habitat types in the Project area include perennial marsh, intermittent stream, mixed perennial marsh and intermittent stream, mixed riparian woodland,

and seasonal wetland (see Table 3-3). The Proposed Project was designed to avoid impacts to mixed riparian woodland and ephemeral stream habitat while minimizing impacts to other sensitive habitat types. However, disturbance to approximately 0.93-acre of sensitive wetland habitats for Project construction is necessary to achieve Project goals and objectives. As described in Chapter 2, *Project Description*, removal of in-channel vegetation and sediment removal is necessary to reduce dense marsh vegetation that directs flow into the channel banks, restore channel capacity, reduce flood risk, and convey SBA water supplies. In addition, some fill of waters of the U.S./state is necessary to meet Project objectives focused on restoring the District's maintenance road, repairing eroded streambanks at discrete locations along Vallecitos Channel, and improving water quality. The boundaries of wetlands and other waters of the U.S./state, which are regulated by the USACE and RWQCB, were delineated within the Project site by H.T. Harvey in February 2016.

More specifically, the Proposed Project would remove approximately 1,270 cubic yards of accumulated sediment and approximately 832 linear feet of dense perennial marsh vegetation (i.e., tule) in order to restore channel flow conveyance and to facilitate repairs to restore the access road. Sediment and vegetation management activities would impact a total of 0.69 acre of wetland and riparian habitat. Impacts to wetland habitats would be considered temporary as emergent vegetation is anticipated to regenerate and recolonize the channel where it is removed within a 5- to 10-year period following Project completion. As described in Chapter 2, where feasible, tule would remain along the channel margins to help dissipate flow energy and to provide riparian habitat. Retaining some tule vegetation along the channel margins would help contain water in the center of the channel and help speed marsh revegetation. Since emergent vegetation is locally abundant in the Vallecitos Channel, impacts to this habitat are largely avoided, and habitat that is impacted is anticipated to regenerate following Project construction, long-term impacts to perennial marsh habitat would be minimal.

Impacts to jurisdictional waters and wetland habitats during construction would further be avoided and minimized as the Project would implement the following BMPs (see Table 2-5):

- BMP-1: Construction Work Windows
- BMP-2: Area of Disturbance
- BMP-3: Erosion and Sediment Control
- BMP-4: On-site Hazardous Materials Management
- BMP-5: Vehicle and Equipment Maintenance
- BMP-8: Fill, Spoils, and Stockpiled Materials

Implementation of **Mitigation Measure HYD-1**, which requires preparing and implementing a SWPPP, would further help avoid and minimize impacts to jurisdictional waters during construction activities. Where partial and full rock slope protection treatments are proposed along the channel bank and where conditions allow, the Proposed Project includes staking of live willow through openings in the RSP below the 10-year flood elevation. Although placement of RSP would be considered an impact to waters of the U.S./state and wetland vegetation may be impacted during excavation and placement of RSP, willow establishment would result in a net increase of native riparian habitat since the areas where RSP is proposed are currently

eroded and barren. Establishing new willow vegetation at the proposed RSP sites would increase habitat diversity and, at a minimum, result in a net zero change in wetland habitat area in the Vallecitos Channel.

Furthermore, the Proposed Project includes constructing a series of four in-channel riparian/wetland benches along the right bank, which would convert 0.60-acre of ruderal/grassland habitat to wetland habitat. The in-channel riparian/wetland benches are designed with a slight depression within the bench center to help retain water and extend the hydroperiod for wetland vegetation to establish. The center of the benches will be revegetated with transplanted tule clumps from the main channel and plantings of other wetland species, while salvaged willows and live willow stakes would be installed near the lower slopes of the benches. Constructing in-channel benches for the riparian/wetland enhancement areas will impact 0.01-acre of seasonal wetland and 0.01-acre of coyote brush shrubland. Impacts to the seasonal wetland would not be substantial due to the small size of the affected wetland, and converting that seasonal wetland to mixed wetland/riparian habitat would provide similar habitat value. Similarly impacts to coyote brush habitat would be minimal due to the relative small size of the impacted coyote brush habitat (approximately 1.6% of total coyote brush habitat within the Project Site), temporary nature of the impact as coyote brush shrubland is expected to regenerate over time, and similar habitat value and functions that the vegetated in-channel benches would provide for wildlife.

The ecological benefits of the Proposed Project are dependent on the successful implementation of the proposed willow staking and wetland habitat enhancement activities. Implementation of **Mitigation Measures BIO-6 and HYD-1** would ensure impacts to jurisdictional wetlands and other sensitive habitat types are **less than significant with mitigation** by requiring preparation and implementation of a wetland habitat restoration monitoring plan.

**Mitigation Measure BIO-6. Prepare and Implement Habitat Mitigation and Monitoring Plan (HMMP).**

The District or its contractor will prepare a Habitat Restoration Mitigation and Monitoring Plan (HMMP) to guide the restoration effort for the on-site in-channel riparian/wetland benches. The HMMP will meet the permitting requirements of the USACE, CDFW, and RWQCB and will include the following information, at a minimum:

- Proposed summary of regulated habitat impacts and proposed restoration and enhancement actions and surface area;
- Goal of the restoration to achieve no net loss of habitat functions and values;
- Location of restoration site(s) and description of existing site conditions;
- Conceptual restoration design;
- Soil amendments and other site preparation elements, as appropriate;

- Planting and/or seeding plan;
- Short-term vegetation maintenance plan (to facilitate habitat establishment) including a conceptual irrigation plan (if needed);
- Post-construction ecological monitoring plan for a 5-year duration. The monitoring plan will describe monitoring methods, performance and success criteria, reporting requirements, and remedial measures/adaptive management strategies. At a minimum, success criteria will include the minimum surface area of restored and/or created mixed perennial marsh/intermittent stream and mixed riparian woodland habitats necessary to meet the habitat mitigation goal of no net loss of sensitive habitat functions. This metric will be measured by a qualified ecologist via a wetland delineation using the USACE wetland delineation protocol and mapping of the footprint of restored mixed riparian habitat. The monitoring plan will also include the success criterion of at least 50 percent average vegetation cover of native-dominated wetland indicator plant species within the restored/created perennial marsh and/or mixed perennial marsh/intermittent stream habitat.

#### Impacts Caused by Non-Native and Invasive Plant Species

The Project site contains several invasive plant species, including Medusa head (*Elymus caput-medusae*), Himalayan blackberry (*Rubus armeniacus*), yellow star-thistle (*Centaurea solstitialis*), poison hemlock (*Conium maculatum*), and others, which have been identified for removal from the Project site and have an impact rating of “high” or “moderate” (California Invasive Plant Council [Cal-IPC] 2021). Perennial marsh habitat includes several non-native species including water iris (*Iris pseudacorus*), considered “limited” by the Cal-IPC (2021).

Construction activities could potentially introduce new weeds that could spread to areas disturbed by the Proposed Project. However, the Proposed Project would implement the following BMPs (see Chapter 2, Table 2-5) to prevent the introduction or spread of invasive species onto the Project site:

- BMP-2: Area of Disturbance
- BMP-11: Minimize Spread of Weeds and Invasive Species

The EACCS PBO GMM 10 requires the Proposed Project use either rice straw or weed-free straw for erosion control materials where straw would be needed. Furthermore, spread of invasive weeds within the Project site would not be considered a significant impact due to the current nature of the Project site and the existing high level of weed invasion present under baseline conditions. As a result, with implementation of BMP-2, BMP-11 and EACCS PBO GMM 10 per **Mitigation Measure BIO-1**, impacts related to the spread of invasive weeds to sensitive habitats and the species they support would be **less than significant with mitigation**.

### Conclusion

The Proposed Project would result in disturbance of perennial marsh, seasonal wetlands, and coyote brush shrubland habitats. Implementation of BMP-1 through BMP-5, and BMP-8 as well as **Mitigation Measure HYD-1** would minimize construction impacts to jurisdictional waters and wetland habitats, and implementation of BMP-2 and BMP-11 would minimize the potential for dispersal of invasive vegetation within the Project site. Incorporating willow stakes at proposed partial and full RSP treatment sites and constructing the four in-channel benches would offset the Project's 0.93 acre impacts to wetland habitat. Although the Project includes establishment of riparian/wetland benches, the Project is in the design phase and measures have not yet been developed to ensure the successful establishment of wetland vegetation on the benches. Therefore, this impact is considered potentially significant. This impact would be mitigated through implementation of **Mitigation Measure BIO-6**, which requires preparation and implementation of a wetland habitat restoration monitoring plan for the on-site benches.

The Proposed Project would result in no net loss of other waters of the U.S. (i.e., conversion of waters to uplands). Impacts of the Proposed Project on federally and State protected wetlands would be less than significant.

In the long term, the Proposed Project would have a beneficial effect on waters of the U.S./state by increasing channel capacity, reducing erosion and sedimentation to the channel, and improving the overall quality of existing aquatic habitat. The in-channel benches may also help attenuate downstream flooding and support local groundwater recharge.

Overall, impacts of the Proposed Project on sensitive natural communities would be **less than significant with mitigation**.

#### ***d. Substantial interference with wildlife movement, established wildlife corridors, or the use of native wildlife nursery sites — Less than Significant***

The Vallecitos Channel and Project area function as a wildlife movement corridor, connecting undeveloped habitats to the south and east with those located to the north and west. Aquatic species such as amphibians and western pond turtles may use the channel for movement between upstream and downstream areas, while birds and other species may use in-channel habitats for seasonal migration stopovers and/or foraging.

Given the channel's seasonal hydroperiod, limited timeframe of the Proposed Project, phased dewatering approach (i.e., on a reach-by-reach basis and pending channel conditions), and open characteristics of the uplands in the Project site and surroundings, the Proposed Project is not expected to substantially alter aquatic species movement. In addition, the Proposed Project would uplift ecological conditions for species reproduction by increasing riparian vegetation, channel shading, available refugia, nesting substrate, and available water by removing dense emergent marsh vegetation spanning portions of the channel. This would be considered a beneficial impact.

Construction activities during the bird breeding season (February 1 through August 31, for most species) could result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. However, the habitats in the Project area currently represent a very small proportion of the habitats that support these species regionally. To reduce potential impacts to nesting birds, the Proposed Project would **Mitigation Measure BIO-4**, which would ensure that project construction activities comply with the MBTA and California F&G Code. In addition, a greater number of birds are anticipated to nest, breed, and forage within the Project area once the willows and wetland enhancement areas have matured. Therefore, Project impacts on nesting and foraging bird species that use the Project site, due to habitat impacts or disturbance of nesting birds, would not rise to the CEQA standard of having a substantial adverse effect, and these impacts would not constitute a significant impact on these species or their habitats.

Although a number of animal species reside and breed on the Project site, no large-scale or regionally important wildlife nurseries are present on the site or would be impacted by the Proposed Project.

As a result, Proposed Project effects on wildlife movement, migratory corridors, and nesting birds would be **less than significant with mitigation**.

***e. Conflict with local policies or ordinances protecting biological resources — Less than Significant***

The Project would remove several trees to facilitate treatment construction, including a multi-stem walnut tree near Drop Structure #8, several willows near Drop Structure #11, and a former willow wall located between Drop Structures #8 and #9. Where feasible, the trees would be salvaged for planting in the riparian/wetland bench areas and/or would be used for live willow staking at the proposed bioengineering treatment sites, partial RSP, and full RSP sites. The Proposed Project would install live willow stakes along the toes of the slope for approximately 1,180 linear feet. In addition, the riparian/wetland bench areas would also support native riparian trees. Following willow maturation, operation and maintenance activities may require selective pruning and trimming of low hanging willow branches as necessary to maintain channel capacity. According to the Alameda County Tree Ordinance, a tree removal permit is required prior to removal of protected trees and trees located within the County's right-of-way. Because no tree removal would occur within the County right-of-way, no tree removal permit would be required for the Proposed Project. Therefore, the Proposed Project would not conflict with local plans or policies protecting biological resources and the impact would be **less than significant**.

***f. Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP — Less than Significant***

The Project site is located within the boundaries of the EACCS, but it is outside the boundaries of a Natural Community Conservation Plan (NCCP). As described in the Regulatory Setting, the

EACCS was created with the intention to provide a framework to protect, enhance, and restore natural resources in East Alameda County while streamlining the environmental permitting process for development and infrastructure projects. It is not, however, an official HCP or a regulatory mechanism. Rather the EACCS is a tool to inform decisions during standard environmental permitting processes for projects that occur in the EACCS study area. Mitigation requirements of the EACCS are outlined for each focal special-status species. A scoresheet has been developed for each focal special-status species using the life history characteristics that make habitat suitable for that species and allows for a standardized method of assessment for project and mitigations sites by a qualified biologist (see Appendix E of the EACCS [ICF 2010]). In addition, the EACCS requires mitigation for impacts on natural communities to be addressed separately in the project's CEQA document for each affected "land cover", or habitat type. Generally, land cover types should be replaced at a 3:1 mitigation ratio unless habitat quality or situation justify otherwise.

Avoidance, minimization, and mitigation measures outlined in this document are consistent with EACCS. Therefore, the Project would not conflict with the provisions of the EACCS and would therefore have **no impact** on approved HCPs and NCCPs.

*This page intentionally left blank*

## 3.5 Cultural Resources

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3.5.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

Construction of the Proposed Project will require a CWA Section 404 permit from the U.S. Army Corps of Engineers. As a result, the project constitutes a federal undertaking as defined by Title 54 USC Section 300101 of the National Historic Preservation Act (NHPA) and mandates compliance with 54 USC Section 306108, commonly known as Section 106 of the NHPA and its implementing regulations found under Title 36 of the CFR Section 800, as amended in 2001. To comply with Section 106 of the NHPA, the project proponent must “take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP).

The implementing regulations of the NHPA require that cultural resources be evaluated for NRHP eligibility if they cannot be avoided by an undertaking (Proposed Project). To determine site significance through application of NRHP criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in Title 36 CFR Section 60.4, “the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association” and must be considered within the historic context. Resources must also be at least 50 years old, except in rare cases, and, to meet eligibility criteria of the NRHP, must:

- (A) Be associated with events that have made a significant contribution to the broad patterns of our history; or

- (B) Be associated with the lives of persons significant in our past; or
- (C) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (D) Have yielded, or may be likely to yield, information important in prehistory or history.

For archaeological sites evaluated under criterion (D) above, integrity requires that the site remain sufficiently intact to convey the expected information to address specific important research questions.

Cultural resources also may be considered separately under the National Environmental Protection Act per Title 42 USC Sections 4321 through 4327. These sections require federal agencies to consider potential environmental impacts and appropriate mitigation measures for projects with federal involvement.

### ***State Laws, Regulations and Policies***

#### **CEQA and CEQA Guidelines**

The proposed project must comply with CEQA (Public Resources Code [Pub. Res. Code] 21000 et seq. and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3), which determine, in part, whether the project has a significant effect on a unique archaeological resource (per Pub. Res. Code 21083.2) or a historical resource (per Pub. Res. Code 21084.1).

CEQA Guidelines CCR 15064.5 notes that “a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.” Lead agencies are required to identify potentially feasible measures or alternatives to avoid or mitigate significant adverse changes in the significance of a historical resource before such projects are approved. According to the CEQA guidelines, historical resources are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (per Pub. Res. Code 5024.1(k));
- Included in a local register of historical resources (per Pub. Res. Code 5020.1) or identified as significant in a historical resource survey meeting the requirements of Pub. Res. Code 5024.1(g); or
- Determined by a lead state agency to be historically significant.

CEQA Guidelines CCR 15064.5 also applies to unique archaeological resources as defined in Pub. Res. Code 21084.1.

### California Register of Historical Resources

Pub. Res. Code Section 5024.1 establishes the CHRH. This register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed, or determined to be eligible for listing, in the NRHP, including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

- 1) Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- 2) Are associated with the lives of persons important in our past;
- 3) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
- 4) Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

## **3.5.2 Environmental Setting**

Cultural resources include prehistoric archaeological sites; historic-era archaeological sites; tribal cultural resources (TCRs); and historic buildings, structures, landscapes, districts, and linear features. The environs surrounding Vallecitos Valley has a rich cultural past that is represented by many examples of these various types of cultural resources. The archaeological record for the region indicates that people have lived in the area for at least 10,000 years. Originally occupied by the Causen Ohlone people (Milliken et al. 2009), the area was used by the Spanish at Mission San Jose, in present-day Fremont, to raise cattle by the early 1800s. After Mexico became independent from Spain, the missions were eventually secularized and the Project area became part of Rancho el Valle de San Jose, which was granted to Antonio Maria Pico, Agustín Bernal, Juan Pablo Bernal, and María Dolores Bernal de Suñol in 1839. Although the rancho lands were long ago divided and the region experienced significant development over the past 25 years, the land around the Vallecitos Channel remains very rural in character, and continues to support livestock, much as it has for the past 175 years.

## **3.5.3 Discussion of Checklist Responses**

A record search was conducted by the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University. The purpose of the record search was to identify the presence of any previously recorded cultural resources within the Project site, and to determine whether any portions of the Project site had been surveyed for cultural resources. The record search (NWIC File No. 15-1098) indicated that four previous cultural resource investigations had been completed entirely or partially within the Project area

and that an additional 11 studies had been conducted within a 0.25-mile radius of the Project area. No cultural resources were previously identified within the Project study area by the records search, although one isolated prehistoric artifact and one prehistoric archaeological site had been recorded within the 0.25-mile record search radius.

A field investigation was conducted of the entire Vallecitos Channel by a qualified archaeologist from Horizon Water and Environment on March 15, 2016. A second survey was conducted of the proposed staging areas on October 16, 2020. One isolated prehistoric artifact was identified and recorded near the channel, but outside of the Project area. The Vallecitos Channel was also recorded and evaluated for eligibility for listing in the NRHP/CRHR.

***a. Cause a Substantial Adverse Change in the Significance of a Historical Resource — No Impact***

As previously discussed, two resources were recorded within or immediately adjacent to the project area: one isolated prehistoric artifact and the Vallecitos Channel. Isolated artifacts generally are considered ineligible for the CRHR due to their limited information potential. The Vallecitos Channel was evaluated for CRHR eligibility and does not appear to meet the eligibility criteria. The site record, which provides the evaluation of the Vallecitos Channel, is included in **Appendix F, Cultural Resources Report**.

As a result, no historical resources, as defined in Section 15064.5 of the CEQA Guidelines, are known to be located within the Project footprint; therefore, there would be **no impact** on historical resources.

It is important to note that historical resources that are archaeological in nature may be accidentally discovered during project construction. Archaeological resources discovered during project construction are discussed further in item 3.5b below.

***b. Cause a Substantial Adverse Change in the Significance of an Archaeological Resource — Less than Significant with Mitigation***

Archaeological surveys of the Project area were conducted on March 15, 2016 and October 16, 2020, by qualified archaeologists from Horizon. No archaeological resources, as defined in Section 15064.5 of the CEQA Guidelines, were identified within the Project footprint. Although an archaeological survey was conducted and no archaeological resources were identified, archaeological remains may be buried with no surface manifestation. Excavation activities related to the Proposed Project have a low potential for uncovering archaeological materials during construction; however, the possibility remains that such excavations could uncover buried archaeological materials. Prehistoric materials most likely would include obsidian and chert flaked-stone tools (e.g., projectile points, knives, and choppers), tool-making debris, or milling equipment such as mortars and pestles. Historic-era materials that might be uncovered include cut (square) or wire nails, tin cans, glass fragments, or ceramic debris.

If archaeological remains are accidentally discovered that are determined eligible for listing in the CRHR, and construction activities would affect them in a way that would render them

ineligible for such listing, a significant impact would result. Should previously undiscovered archaeological resources be found, implementation of **Mitigation Measure CR-1** would require the contractor to immediately halt work if materials are discovered, evaluate the finds for NRHP/CRHR eligibility, and implement appropriate mitigation measures, as necessary. Implementation of Mitigation Measure CR-1 would reduce impacts related to accidental discovery of significant archaeological resources to a level that is **less than significant with mitigation**.

**Mitigation Measure CR-1: Immediately Halt Construction If Cultural Resources Are Discovered, Evaluate All Identified Cultural Resources for Eligibility for Inclusion in the NRHP/CRHR, and Implement Appropriate Mitigation Measures for Eligible Resources.**

The ACWD will include this measure in construction plans and specifications. If any cultural resources, such as structural features, unusual amounts of bone or shell, flaked or ground stone artifacts, historic-era artifacts, human remains, or architectural remains, are encountered during any project construction activities, work shall be suspended immediately at the location of the find and within a radius of at least 50 feet and the ACWD will be contacted.

All cultural resources accidentally uncovered during construction within the Project site will be evaluated for eligibility for inclusion in the NRHP/CRHR. Resource evaluations will be conducted by individuals who meet the U.S. Secretary of the Interior's professional standards in archaeology, history, or architectural history, as appropriate. If any of the resources meet the eligibility criteria identified in Pub. Res. Code Section 5024.1 or Pub. Res. Code Section 21083.2(g), mitigation measures will be developed and implemented in accordance with CEQA Guidelines Section 15126.4(b) before construction resumes.

For resources eligible for listing in the NRHP/CRHR that would be rendered ineligible by the effects of project construction, additional mitigation measures will be implemented. Mitigation measures for archaeological resources may include (but are not limited to) avoidance; incorporation of sites within parks, greenspace, or other open space; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for archaeological resources will be developed in consultation with responsible agencies and, as appropriate, interested parties such as Native American tribes. Native American consultation is required if an archaeological site is determined to be a TCR. Implementation of the approved mitigation would be required before resuming any construction activities with potential to affect identified eligible resources at the site.

***c. Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries — Less than Significant with Mitigation***

No evidence of human remains was observed at the Project site, nor are human remains known to exist in or near the Project area. Although unlikely, there is the possibility that excavations associated with construction could uncover burials, if they are present. Impacts on accidentally discovered human remains would be considered a significant impact. Implementation of

**Mitigation Measure CR-2** would require that, if human remains are uncovered, work must be halted, and the County Coroner must be contacted. Adherence to these procedures and provisions of the California Health and Safety Code would reduce potential impacts on human remains to a level that is **less than significant with mitigation**.

**Mitigation Measure CR-2: Immediately Halt Construction if Human Remains Are Discovered and Implement Applicable Provisions of the California Health and Safety Code.**

The ACWD will include this measure in construction plans and specifications. If human remains are accidentally discovered during project construction activities, the requirements of California Health and Human Safety Code Section 7050.5 will be followed. Potentially damaging excavation will halt in the vicinity of the remains, with a minimum radius of 100 feet, and the Alameda County Coroner will be notified. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (California Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, they must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). Pursuant to the provisions of Pub. Res. Code Section 5097.98, the NAHC will identify a Most Likely Descendent (MLD). The MLD designated by the NAHC will have at least 48 hours to inspect the site, once access is granted, and propose treatment and disposition of the remains and any associated grave goods. The ACWD will work with the MLD to ensure that the remains are removed to a protected location and treated with dignity and respect.

## 3.6 Energy

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.6.1 Regulatory Setting

This section describes the federal, state, and local regulations related to energy resources. Section 3.8, "Greenhouse Gas Emissions," contains additional discussions of GHG-related regulations that may also be relevant to energy resources.

#### ***Federal Laws, Regulations, and Policies***

At the federal level, the USEPA and NHTSA set standards for passenger cars and light trucks for the CAFE standards and GHG emissions standards. In March 2020, NHTSA and USEPA revised these standards under the SAFE Vehicles Rule, which increases the stringency of fuel economy and carbon dioxide standards by 1.5 percent each year for model years 2021 through 2026. This is less than previous standards issued in 2012, which would have required increases of about 5 percent per year.

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provides incentives to reduce current demand on these resources. This act included establishing energy-related tax incentives for energy efficiency and conservation; renewable energy; oil and gas production; and electricity generation and transmission. The act also increased the amounts of renewable fuel (e.g., ethanol or biodiesel) to be used in gasoline sold in the U.S., increased oil and natural gas production on federally owned lands, and established federal reliability standards regulating the electrical grid.

#### ***State Laws, Regulations, and Policies***

Energy resource-related regulations, policies, and plans at the state level require the regular analysis of energy data and developing recommendations to reduce statewide energy use and setting requirements on the use of renewable energy sources. Senate Bill (SB) 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an *Integrated Energy Policy*

*Report* for the governor and legislature every 2 years (CEC 2020). The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research (CEC 2020). The 2018 *Integrated Energy Policy Report Update* includes policy recommendations such as addressing the vulnerability of California's energy infrastructure to extreme events related to climate change, including sea-level rise and coastal flooding (CEC 2018).

Since 2002, California has established a Renewables Portfolio Standard (RPS) program, through multiple Senate bills (SB 1078, SB 107, SB X1-2, SB 350, SB 100) and Executive Orders (S-14-08, B-55-18). The RPS program requires that increasingly higher targets of electricity retail sales be served by eligible renewable resources. The established eligible renewable source targets are 20 percent of electricity retail sales by 2010, 33 percent of electricity retail sales by 2020, 50 percent by 2030, and 100 percent zero-carbon electricity for the state and statewide carbon neutrality by 2045.

Section 3.8, "Greenhouse Gas Emissions," provides additional details on California's 2017 *Climate Change Scoping Plan*, which details the state's strategy for achieving its GHG targets, including energy-related goals and policies. The plan contains measures and actions that may pertain to the Proposed Project relating to vehicle efficiency and transitioning to alternatively powered vehicles.

### ***Local Laws, Regulations, and Policies***

No local laws, regulations, or policies regarding energy are applicable to the Proposed Project.

## **3.6.2 Environmental Setting**

California has extensive energy resources, including an abundant supply of crude oil and high production of conventional hydroelectric power; the state leads the nation in electricity generation from renewable resources (solar, geothermal, and biomass resources) (U.S. Energy Information Administration [EIA] 2020). California has the second highest total energy consumption in the United States but one of the lowest energy consumption rates per capita (48th in 2018) due to its mild climate and energy efficiency programs (EIA 2020). A comparison of California's energy consuming end-use sectors indicates that the transportation sector is the greatest energy consumer, by approximately two times compared to the other end-use sectors (Industrial, Commercial, and Residential, listed in order of greatest to least consumption) (EIA 2020). California is the largest consumer of motor gasoline and jet fuel in the United States (EIA 2020).

### 3.6.3 Discussion of Checklist Responses

**a. Result in Potentially Significant Environmental Impacts due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources — Less than Significant**

The Proposed Project would require the use of fossil fuels during project construction to operate equipment that is necessary for completion of the Project. The construction equipment would be subject to state and federal regulations that, among other standards, require equipment engines to meet certain performance standards. During operation, the Project would require the use of fossil fuels to conduct limited maintenance activities that are necessary to maintain stream flows.

**Table 3-7** shows the estimated fuel consumption from construction and maintenance activities. The CARB In-Use Off-Road Diesel Emission Factors (EMFAC) model was used to estimate the total amount of diesel fuel use. EMFAC was used to estimate the gasoline and diesel fuel used by on-road vehicles. As shown in Table 3-7, construction of the Proposed Project would require about 32,911 gallons of diesel fuel. Gasoline use would be primarily related to worker commute trips to and from the construction site and is estimated to be 960 gallons. Maintenance activities are estimated to use 715 gallons of diesel and 8 gallons of gasoline per year. The Proposed Project construction and maintenance activities would use equipment similar to other stream maintenance projects; therefore, there is no reason to conclude that the Proposed Project's construction and maintenance-related energy use would be excessive or wasteful. For this reason, impacts on energy use would be **less than significant**.

**Table 3-7. Estimated Fuel Consumption**

Activity Fuel Consumption	Gasoline (gallons)	Diesel (gallons)
Construction Activity On-Road Vehicles	960	4,208
Construction Activity Off-Road Equipment		28,703
Total for Construction	<b>960</b>	<b>32,911</b>
Maintenance Activity On-Road Vehicles (annual)	8	1
Maintenance Activity Off-Road Equipment (annual)		714
Total for Maintenance (Annual)	<b>8</b>	<b>715</b>

**b. Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency — Less than Significant**

While the Proposed Project would not reduce fossil fuel reliance or specifically increase or encourage renewable energy generation, it would not impede future use of renewable energy sources. As such, the Proposed Project would not impede progress toward RPS goals or implementation of energy efficiency programs. Therefore, this impact would be **less than significant**.

*This page intentionally left blank*

### 3.7 Geology, Soils, and Seismicity

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.7.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

##### National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk reduction program to better understand, predict, and mitigate risks associated with seismic events. Four federal agencies are responsible for coordinating activities under NEHRP: USGS; National Science Foundation (NSF); Federal Emergency Management Agency (FEMA); and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning (CRS 2018).

#### ***State Laws, Regulations, and Policies***

##### Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Pub. Res. Code Section 2621 et seq.) was passed to reduce the risk to life and property from surface faulting in California. The Alquist-Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are “sufficiently active” and “well defined.” Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

##### Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Pub. Res. Code Sections 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other seismic hazards, and cities and counties are required to regulate development within mapped seismic hazard zones. In addition, the act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability. Under the Seismic Hazards Mapping Act, cities and counties may withhold the development permits for a site within seismic hazard zones until appropriate site-specific geologic and/or geotechnical

investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

#### California Public Resources Code

California Public Resources Code, Section 5097.5 states that “no person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.” As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

### ***Local Laws, Regulations, and Policies***

#### East County Area Plan

The *East County Area Plan* guides land use and development in unincorporated Alameda County. The following goal and policy related to seismic and geologic hazards are applicable to the Proposed Project (Alameda County Community Development Agency Planning Department 1994):

**Goal:** To minimize the risks to lives and property due to seismic and geologic hazards.

**Policy 314:** The County shall prohibit the construction of any structure intended for human occupancy within 50 feet on either side of the Calaveras, Greenville, or Verona earthquake fault zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act.

## **3.7.2 Environmental Setting**

### ***Geology***

The Project area is located within the Diablo Range of the Northern California Coast Ranges, a part of the California’s Coast Ranges Geomorphic Province, a highly seismically active area with a series of northwest-southeast-trending mountain ranges and intervening valleys. The Vallecitos Channel lies within the La Costa Valley in the southwestern portion of the greater Livermore Valley. Underlying geologic units of the La Costa Valley consist of Quaternary (Holocene) alluvium and older Plio-Pleistocene nonmarine deposits of sand and gravel (Wagner et al. 1991). Quaternary alluvium can be found along stream channels and fan deposits, including the Vallecitos Channel and the narrow valley floor within the Project area, and are characterized as unconsolidated clay to boulder sized materials. Plio-Pleistocene nonmarine deposits make up the hillslopes south of the Project area and generally consist of conglomerate, sandstone, siltstone, and claystone.

## ***Soils***

Mapping by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) identifies soils underlying the Project area as Clear Lake clay (present on 0-2 percent slopes), Pleasanton gravelly loam (present on 3-12 percent slopes), and Positas gravelly loam (2-20 percent slopes) (NRCS 2021). These soil units are described as follows (NRCS 2021):

**Clear Lake Series** – Derived from alluvium of a mixture of sedimentary, metamorphic, and igneous rock, Clear Lake clay is a fine textured soil considered very deep, poorly drained with high runoff. Clear Lake soils are found in floodplains and drainage swales. These soils have a high shrink-swell potential and are classified as expansive soils.

**Pleasanton Series** – Found in alluvial fans and terraces, Pleasanton soils are well-drained with slow to medium runoff. Formed in alluvial material from sandstone and shale. These soils have a medium shrink-swell potential.

**Positas Series** – Formed in alluvial material from sandstone and shale, Positas soils are moderately well drained and have a medium to very high runoff. Found in stream terraces and hill slopes. These soils have a medium shrink-swell potential.

## ***Seismicity***

Seismicity in the Project area is associated with the San Andreas fault system. The Project area is situated approximately one mile east of the Calaveras fault, which extends approximately 100 miles north from the city of Hollister to Mt. Diablo. However, the Project area is not within the Calaveras earthquake fault zone as designated by California Geologic Society (DOC 2020). Other faults in vicinity of the Project area include the northwest-trending Verona Fault (0.5 mile north), the east-trending Las Positas Fault (1.3 miles northeast), and southeast trending William Fault (1.4 miles east) (DOC 2020).

## **Landslides**

Rock slope failure or landslides may occur in steeply sloped areas during substantial seismic events. Saturated soils and precipitation events increase the likelihood of a landslide being triggered. The California Geologic Survey compiled and created statewide landslide susceptibility maps through interpolation of historic landslide information, local geology, rock strength, and hillslope angle (methodology by Wilson and Keefer 1985 and implemented by Ponti et al. 2008) to create classes of landslide susceptibility (where 0 is low and 10 is high) (DOC 2020, Wills et al. 2011). In general, steep slopes and weak rocks are more likely to generate landslides, while landslide susceptibility is low on very low slopes, even in weak materials.

The Project site is relatively flat with low susceptibility to landslides. Hillslopes south of the Project area have a moderate (V to VIII) susceptibility to landslides, particularly during or soon after very wet winters when the ground is saturated for extended periods (DOC 2020).

### Liquefaction

Soil liquefaction is a phenomenon that occurs when saturated sandy or silty soils lose strength during cyclic loading, such as caused by earthquakes. The factors known to influence liquefaction potential are soil type and depth, grain size, density, groundwater level, degree of saturation, and both the intensity and duration of ground shaking.

Liquefaction hazard mapping in the region indicates that younger alluvial materials (Holocene-age) in the Project area are rated moderate for liquefaction hazard while older alluvial materials (Pleistocene-age) are rated low hazard (USGS 2006).

### ***Paleontological Resources***

A paleontological resource is defined as fossilized remains of vertebrate and invertebrate organisms, fossil tracks, and plant fossils. In California, paleontological resources are generally observed in sedimentary and metasedimentary deposits. Based on a database query of the University of California Museum of Paleontology (UCMP) in search of paleontological discoveries, 533 recorded collections were found within Alameda County. Specimens included plant material, invertebrates, microfossils, and vertebrates; and were found in geologic formations listed below (UCMP 2021). Geologic formations within Alameda County with recorded<sup>2</sup> paleontological resources include:

- |           |                 |             |
|-----------|-----------------|-------------|
| ▪ Alamo   | ▪ Knoxville     | ▪ San Pablo |
| ▪ Briones | ▪ Moreno Grance | ▪ Tesla     |
| ▪ Cierbo  | ▪ Neroly        |             |

Many recorded paleontological resources had unspecified locations within the County; however, the no paleontological resources were located in the vicinity of the Project area (UCMP 2021).

## **3.7.2 Discussion of Checklist Responses**

### ***a. Expose People or Structures to Adverse Effects Involving:***

#### **i. Seismic Related Rupture of Known Earthquake Fault — *No Impact***

Ground surface ruptures occur along earthquake fault lines. The Proposed Project is not located within an Alquist-Priolo Fault Zone and the nearest active fault is the Calaveras Fault Zone, approximately 0.5 mile north of the Project area. Proposed Project activities would not be affected by risks related to seismic rupture of a known earthquake. Therefore, the Proposed Project would not expose people or structures to seismic risks related to seismic rupture of a known earthquake fault, and there would be **no impact**.

---

<sup>2</sup> Some collections did not specify geologic formation (UCMP 2020).

**ii. Strong Seismic Groundshaking — *Less than Significant***

The Project area is located in a seismically active area that can be expected to experience strong earthquake groundshaking during the lifetime of the Proposed Project. Earthquakes on larger regional faults in the area would likely result in higher ground motion at the site than earthquakes on smaller faults located near the Project area. Strong groundshaking could result from movement of the Calaveras Fault. However, the Proposed Project would not involve construction of new housing or other buildings. As such, the Proposed Project would not change the risks associated with strong seismic groundshaking relative to the baseline conditions. Therefore, this impact would be **less than significant**.

**iii. Seismically Related Ground Failure, Including Liquefaction — *Less than Significant***

The Project area is located in an area designated as a low to moderate seismic hazard liquefaction zone (USGS 2006). The Proposed Project includes the active channel and floodplain of the Vallecitos Channel and is underlain by stream channel and floodplain alluvial deposits and a shallow water table that increase the risk of liquefaction and differential settlement (DOC 2019; NRCS 2021; Wagner et al. 1991). However, the Proposed Project would not involve construction of structures that would expose people to adverse effects associated with seismic activity. There would be no change in exposure of structures or people to these risks as a result of the Proposed Project. Therefore, potential seismic-related hazards including ground failure and liquefaction would be **less than significant**.

**iv. Landslides, Including Seismically Induced Landslides — *Less than Significant***

The Project area's topography is relatively flat and is not subject to landslide risk. No substantial landslides or debris flows were identified in the Project area through review of seismic hazard maps (DOC 2020) or field observations. Under saturated soil conditions, exposed and eroded channel banks may have greater potential for seismic induced landslides. During the Project's construction phase, earthwork activities conducted along the Vallecitos Channel might further expose channel banks or loosen soils. However, upon completion of proposed construction activities, the Proposed Project would stabilize the channel banks and thereby reduce landslide potential. Therefore, this impact would be **less than significant**.

**b. Result in Substantial Soil Erosion or Loss of Topsoil — *Less than Significant with Mitigation***

Project construction activities, including excavation associated with sediment and vegetation removal, and minor bank grading, would have the potential to contribute to erosion during the construction period. To limit the potential for erosion and loss of topsoil, ACWD would implement the following BMPs described in Table 2-5 of Chapter 2, *Project Description*:

- BMP-1: Construction Work Windows
- BMP-2: Area of Disturbance
- BMP-3: Erosion and Sediment Control
- BMP-8: Fill, Spoils, and Stockpiled Materials

BMP-3, in particular, specifies that all soils disturbed or exposed during construction activities be seeded and stabilized using measures such as erosion control fabric or hydromulch, except those within the channel below the ordinary high water mark. Since the Proposed Project would affect an area greater than 1.0 acre, a Stormwater Pollution Prevention Plan (SWPPP) would be required that includes erosion control and hazardous materials management measures in accordance with the SWRCB's Construction General Permit. Implementation of **Mitigation Measure HYD-1**, which requires preparation and implementation of the SWPPP, would reduce potential erosion and loss of topsoil.

While the channel would be mostly dry during project construction, ponded water may be present in local depressions near drop structures. Therefore, depending on channel conditions, some in-channel work within a given reach of the Vallecitos Channel may require localized dewatering. Where dewatering is needed to facilitate in-channel construction, water would be conveyed and discharged to the channel downstream of the work area. With SWPPP implementation per Mitigation Measure HYD-1 and ACWD oversight of required BMPs mentioned above, impacts related to accelerated erosion during construction would be less than significant. Long-term operation and maintenance of the Project would be limited to minor road repairs, selective pruning and trimming of willows, and other in-channel vegetation management using hand tools, and limited herbicide application to control growth of invasive species.

In addition, proposed treatments (e.g., vegetation management, bioengineering, and partial and full RSP) would stabilize areas where severe streambank erosion is evident and protect the bank from future erosion and would thus have a beneficial effect compared to existing conditions. As a result, this impact related to soil erosion and loss of topsoil would be **less than significant with mitigation**.

***c. Be Located on a Geologic Unit or Soil That Is Unstable, or That Would Become Unstable as a Result of the Proposed Project, and Potentially Result in On- or Off-site Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse — Less than Significant***

As stated above, the Project area is relatively flat and not susceptible to landslides, and the Proposed Project would not increase the potential for off-site landsliding. In addition, the Proposed Project would not involve removal of groundwater or other subsurface resources and would not increase risks of subsidence or collapse.

Lateral spreading typically occurs along streambanks or depositional areas where saturated, unconsolidated sediments overlie a more compacted soil layer. The alluvial soils in the Project area may be susceptible to lateral spreading under certain conditions. Proposed bank stabilization treatments including biotechnical approaches, planted RSP at the bank toe, full bank RSP, and engineered backfill placement would increase bank strength and stability during saturated soil conditions and seismic events. Therefore, this impact would be **less than significant**.

***d. Be Located on Expansive Soil Such that Substantial Direct or Indirect Risks to Life or Property — Less than Significant***

Expansive soils are predominantly composed of clays and can undergo substantial volume change in response to changes in moisture content. During wetting and drying cycles, expansive soils may shrink and swell, creating differential ground movements. The shrink-swell potential for soils in the Project area range from medium (Positas gravelly loam) to high (Clear Lake clay). Actual shrink-swell potential is unknown in the active alluvium channel but is inferred to be low where alluvium is dominated by sand and gravel since shrink-swell behavior correlates with the presence of particular clay minerals in the fine sediment fraction.

If moderately expansive soil materials are present in streambank areas, there may be minimal risk for shrink-swell behavior to result in minor degradation of proposed bank stabilization treatments over time. However, annual inspection of the Vallecitos Channel and proposed treatments would identify potential deformation rising to the level of a performance concern, and any such damage would be corrected through maintenance of the proposed treatments and on-going general channel maintenance activities. In addition, the Proposed Project does not involve constructing structures that would create risks to life or property. Thus, based on the above discussion, impacts on the Proposed Project as a result of expansive soils would be **less than significant**.

***e. Have Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems in Areas Where Sewers Are Not Available for the Disposal of Wastewater — No Impact***

The Proposed Project would not include any uses, features, or facilities that would generate wastewater. During construction, portable restroom facilities would be provided for construction workers and sewage would be hauled off site. Septic tanks or other alternative wastewater disposal systems would not be necessary; therefore, the Proposed Project would have **no impact**.

***f. Directly or Indirectly Destroy a Unique Paleontological Resource or Site or a Unique Geologic Feature — Less than Significant***

No fossils have been discovered in the project vicinity. Project construction activities would entail in-channel sediment removal of alluvial material deposited since the channel's construction approximately 50 years ago. Other ground-disturbing activities include minor grading of the access road and shallow excavation of the uppermost soil horizon along the bank toe and in-channel benches. These activities would be limited in scope and depth below the existing ground surface elevation and are not expected to encounter bedrock or other fossil-bearing rock formation. Therefore, potential impacts to unique paleontological resources or geologic features would be considered **less than significant**.

## 3.8 Greenhouse Gas Emissions

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.8.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

At the federal level, the USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting and reporting requirements for large stationary emitters of GHGs. The USEPA and NHTSA set standards for passenger cars and light trucks for the CAFE standards and GHG emissions standards. In March 2020, NHTSA and the USEPA revised these standards under the SAFE Vehicles Rule, which increases the stringency of fuel economy and carbon dioxide standards by 1.5 percent in stringency each year for model years 2021 through 2026. This is less than previous standards issued in 2012, which would have had increase of about 5 percent per year.

#### ***State Laws, Regulations, and Policies***

In recent years, California has enacted numerous policies and plans to address GHG emissions and climate change. In 2006, the California State Legislature enacted Assembly Bill (AB) 32, the Global Warming Solutions Act, which set the overall goals for reducing California's GHG emissions to 1990 levels by 2020. SB 32, a follow-up to the California Global Warming Solutions Act of 2006 (AB 32), similarly calls for a statewide GHG emissions reduction to 40 percent below 1990 levels by December 31, 2030. Executive Orders (EOs) S-3-05 and B-16-2012 further extend this goal to 80 percent below 1990 levels by 2050. The CARB has completed rulemaking to implement several GHG emission reduction regulations and continues to investigate the feasibility of implementing additional regulations. These include the low carbon fuel standard, which reduces GHG emissions associated with fuel usage, and the renewable portfolio standard, which requires electricity suppliers to increase the amount of electricity generated from renewable sources. CARB has implemented a mandatory reporting regulation and a cap-and-trade program for large emitters of GHGs.

*California's 2017 Climate Change Scoping Plan* outlines the strategies that will be implemented to reach the 2030 goal (CARB 2017). This includes focusing on increasing building efficiency, increasing renewable power, using clean and renewable fuels, using cleaner aero or near zero vehicles, enhancing walkable and bikeable communities with transit, cleaner freight and goods movement, reduce emissions of pollutants with high global warming potential (GWP), cap emissions from key sectors, and invest in communities to reduce emissions.

## ***Local Laws, Regulations, and Policies***

### **Bay Area Air Quality Management District**

The BAAQMD has adopted and released the *Final 2017 Bay Area Clean Air Plan* (also known as *Spare the Air – Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*) and *Regional Climate Protection Strategy* (RCPS) that updates the *2010 Bay Area Clean Air Plan*; provides a road map for the BAAQMD's future efforts to reduce air pollution; and identifies rules, control measures, and strategies to reduce GHG emissions throughout the Bay Area. As part of this update, 85 control measures have been identified and categorized within nine economic sectors, including stationary sources, transportation, waste, water, and energy. In addition, the BAAQMD has established a Climate Protection Planning Program, which aims to achieve its goal of reducing GHG emissions in the Bay Area by establishing GHG reduction goals, developing and implementing the 2017 Clean Air Plan, and working with local governments (BAAQMD 2020). The BAAQMD's GHG emission reduction goals are 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050 (BAAQMD 2020).

The BAAQMD CEQA Guidelines (BAAQMD 2017) included operation-related thresholds of significance for land use development and stationary-source projects. Stationary sources have a threshold of 10,000 metric tons (MT) of carbon dioxide equivalents (CO<sub>2</sub>e). For land use development projects, including residential, commercial, industrial, and public land uses and facilities, the threshold includes compliance with a qualified GHG reduction strategy or annual emissions of less than 1,100 MT CO<sub>2</sub>e or efficiency performance criteria based on service population (BAAQMD 2017). This "bright-line threshold" of 1,100 MT CO<sub>2</sub>e was set for the 2020 goal established in AB 32. At the time of publication, the BAAQMD has not provided an updated analysis regarding the applicability of this bright-line threshold to the 2030 and 2050 goals of SB 32. Because implementation of the Proposed Project would take place after 2020, the GHG analysis should consider whether the project would make substantial progress toward these future goals. In absence of guidance from the BAAQMD, the relevance of an appropriate threshold for post-2020 GHG emissions must be considered. This analysis presents several threshold options and evaluates the Proposed Project against each option to support the final impact conclusion.

### *Bright-Line Threshold*

One option to consider is to continue the use of the 1,100 MT CO<sub>2</sub>e threshold. This threshold was established by the BAAQMD by conducting a “gap” analysis, considering the emissions reductions required from projects undergoing CEQA review that are not otherwise addressed by existing regulations or strategies identified in the Scoping Plan. The BAAQMD determined that, with a bright-line threshold of 1,100 MT CO<sub>2</sub>e, most CEQA projects would be required to implement all feasible mitigation measures because they would exceed this threshold and, most importantly, that 92 percent of GHG emissions above this threshold would be captured (BAAQMD 2017).

Sacramento Metropolitan Air Quality Management District (SMAQMD) initially conducted a similar analysis of the CEQA projects that would be captured by establishing a bright-line threshold for the 2020 goals. Recently, SMAQMD updated its analysis and determined that the existing bright-line threshold would still capture over 98 percent of GHG emissions (SMAQMD 2020). Thus, it would be reasonable to assume that an updated analysis by the BAAQMD would find that projects would continue to achieve a high capture rate of total GHG emissions with use of this bright-line threshold. This conclusion supports the continued use of 1,100 MT CO<sub>2</sub>e as a significance threshold post-2020 and indicates that continued progress toward the 2030 and 2050 goals is likely to be maintained with this bright-line threshold.

### *Revised Bright-Line Threshold*

A second option to consider is applying the CARB’s 40 percent reduction target for 2030 compared to 2020 levels. Applying this to the BAAQMD’s bright-line threshold would produce a revised bright-line threshold of 660 MT CO<sub>2</sub>e. This option would be overly conservative, as existing regulations will reduce the statewide and Alameda County unincorporated area emissions substantially.

### *Other Threshold Options*

Other threshold options considered and dismissed for evaluation of the Proposed Project are use of an efficiency metric or comparison to a “business as usual” (BAU) or reference percent reduction. An efficiency metric, such as the BAAQMD’s 4.2 MT CO<sub>2</sub>e per service population or GHG per acre managed, is not a feasible option because it would be difficult to establish the correct service population or alternative metric to apply to managed lands, such as comparing emissions to a typical residential/commercial land use project, where this type of threshold is more commonly used. Without a reliable method for quantifying this change, a BAU analysis would not be meaningful.

### *Threshold Used in This Analysis*

Based on these two potential options of bright-line thresholds, ranging from 660 MT CO<sub>2</sub>e per year to 1,100 MT CO<sub>2</sub>e per year, emissions less than any of these possible values would be less

than significant because the project would be making substantial progress toward the 2030 and 2050 GHG emission goals.

#### East County Area Plan

The *East County Area Plan* does not contain any objectives, policies, and actions that may be relevant to the Proposed Project with respect to GHGs.

#### Alameda County (Unincorporated Areas) Community Climate Action Plan

The Alameda County (Unincorporated Areas) Community Climate Action Plan approved on February 4, 2014, outlines a course of action to reduce community-wide GHG emissions generated within the unincorporated areas of Alameda County. Implementation of the Climate Action Plan will reduce GHG emissions to 15 percent below 2005 levels by 2020 and set the County on a path toward reducing emissions to 80 percent below 1990 levels by 2050. The 2005 baseline emissions were 930,000 MT CO<sub>2</sub>e. The 2050 goal would reduce unincorporated County emissions to 785,070 MT CO<sub>2</sub>e. The plan outlines action in six areas: transportation, land use, building energy, water, waste, and green infrastructure. Strategies and measures that are relevant to the Proposed Project include the following:

- WS-1. Increase solid waste reduction and diversion to 90 percent by 2030.
- WS-2. Strengthen the Construction and Demolition Debris Management Ordinance.
- G-2. Include carbon sequestration as an objective within County-led natural area restoration projects.

### **3.8.2 Environmental Setting**

Climate change is caused, in part, from accumulation in the atmosphere of GHGs, which are produced primarily by the burning of fossil fuels for energy. Because GHGs (CO<sub>2</sub>, methane [CH<sub>4</sub>], NO<sub>2</sub>, and chlorofluorocarbons [CFCs]) persist and mix in the atmosphere, emissions anywhere in the world affect the climate everywhere in the world. Consequently, the cumulative analysis is the same as the discussion concerning Proposed Project impacts. GHG emissions are typically reported in terms of CO<sub>2</sub>e, which convert all GHGs to an equivalent basis taking into account their GWP compared to CO<sub>2</sub>.

Global climate change is already affecting ecosystems and societies throughout the world. Climate change adaptation refers to the efforts undertaken by societies and ecosystems to adjust to and prepare for current and future climate change, thereby reducing vulnerability to those changes. Human adaptation has occurred naturally over history; people move to more suitable living locations, adjust food sources, and more recently, change energy sources. Similarly, plant and animal species also adapt over time to changing conditions; they migrate or alter behaviors in accordance with changing climates, food sources, and predators.

In 2018, total California GHG emissions were 425 million MT CO<sub>2</sub>e (CARB 2020). This is 6 million MT CO<sub>2</sub>e below the 2020 GHG limit set by AB 32. This represents a per capita GHG emission rate of 10.7 MT CO<sub>2</sub>e per person. In 2018, the transportation sector of the California economy was the largest source of emissions, accounting for approximately 40 percent of the total emissions and represented a decrease in emission for this sector for the first time since 2013. Emissions from the electricity sector account for 15 percent of the inventory and showed a slight increase in 2018 due to less hydropower. Emissions from high-GWP gases have continued to increase as they replace ozone depleting substances that are being phased out.

### 3.8.3 Discussion of Checklist Responses

#### ***a. Generate a Net Increase in Greenhouse Gas Emissions which may have a Significant Impact on the Environment — Less than Significant***

The Proposed Project would generate GHG emissions during construction and operation. Construction-related GHG emissions would result from the combustion of fossil-fueled construction equipment, material hauling, and worker trips. Estimated emissions associated with the project's construction activities would be 325 CO<sub>2</sub>e. Construction-related emissions were estimated using CalEEMod version 2016.3.2, which uses estimates from CARB's models for off-road vehicles and EMFAC 2014. Project construction assumptions, including equipment usage, schedule, and haul routes used for this analysis, were based on information provided by ACWD. Appendix C contains Proposed Project GHG emissions estimates.

During maintenance activities, emissions would be substantially less than 7 MT CO<sub>2</sub>e generated during construction since the volume of sediment removal during maintenance activities would be much lower than the construction-related volume of soil and sediment transported during construction, and since emission factors associated with equipment and vehicle turnovers project a decrease in emissions over time.

As discussed above, the BAAQMD does not have a recommended threshold for construction-related GHG emissions nor an operational GHG threshold beyond 2020. However, as discussed above the GHG emissions from the Proposed Project are less than the proposed revised range of 660 to 1,000 MT CO<sub>2</sub>e per year to be applicable to make reasonable progress toward the 2030 and beyond goals for GHG emission reductions. Construction and operational emissions would both fall below this operational threshold range. Therefore, the proposed project would not conflict with any plans or policies adopted to reduce GHG emissions. Impacts related to generation of GHG emissions would be **less than significant**.

#### ***b. Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing Greenhouse Gas Emissions — Less than Significant***

The Proposed Project would be subject to statewide and local GHG emission reduction plans and policies. The State of California implemented AB 32 to reduce GHG emissions to 1990 levels by 2020. SB 32 codified an overall goal for reducing California's GHG emissions to 40 percent below 1990 levels by 2030. EOs S-3-05 and B-16-2012 further extend this goal to 80 percent

below 1990 levels by 2050. Through the Alameda County Community Climate Action Plan, the unincorporated area of Alameda County set a GHG emissions reduction target of 15 percent below 2005 levels by 2020 and 80 percent below 1990 levels by 2050. Alameda County's Climate Action Plan (2014) provides details on how this goal will be met with proposed measures and supporting actions that include solid waste diversion goals and increased carbon sequestration. The Proposed Project would be consistent with solid waste diversion practices and increases the carbon sequestration in the area with the planting of willow trees. For the reasons detailed here and in item (a) above, the Proposed Project would not conflict with AB 32 or SB 32, the local general plan, or Alameda County's climate action plan. Therefore, this impact would be **less than significant**.

### 3.9 Hazards and Hazardous Materials

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Be within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.9.1 Regulatory Setting

#### ***Federal and State Laws, Regulations, and Policies***

Hazardous substances and contaminated sites are regulated under federal and state laws, including the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Superfund Amendment and Reauthorization Act (SARA). The majority of these laws are administered and enforced by state agencies such as the California Department of Toxic Substances Control (DTSC) and the SWRCB.

#### **CAL FIRE Wildland Fire Management**

The Office of the State Fire Marshal and the California Department of Forestry and Fire Protection (CAL FIRE) administer state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Pub. Res. Code Section 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Pub. Res. Code Section 4428).
- Additional wildfire safety requirements established by CAL FIRE are described in Section 3.20, "Wildfire."

#### ***Local Laws, Regulations and Policies***

#### **East County Area Plan**

The *East County Area Plan* guides land use and development in unincorporated Alameda County. Goals and policies in the area plan related to hazards and hazardous materials applicable to the Proposed Project include the following (Alameda County Community Development Agency Planning Department 1994):

#### ***Solid Waste and Hazardous Waste Facilities***

**Goal:** To provide sufficient long-term landfill capacity for County residents, without impeding achievement of recycling goals in the County Charter, and to ensure the compatibility of solid waste facilities and adjacent uses.

**Policy 154:** The County shall abide by the policies and Siting Criteria in the Alameda County Hazardous Waste Management Plan to ensure the responsible handling of hazardous waste in the County.

### *Police, Fire, and Emergency Medical Services*

**Goal:** To ensure the prompt and efficient provision of police, fire and emergency medical facility and service needs.

**Policy 241:** The County shall provide effective law enforcement, fire, and emergency medical services to unincorporated areas.

### *Fire Hazards*

**Goal:** To minimize the risks to lives and property due to fire hazards.

**Policy 324:** The County shall require the use of fire resistant building materials, fire-resistant landscaping, and adequate clearance around structures in “high” and “very high” fire hazards areas.

## **3.9.2 Environmental Setting**

The following section describes the environmental setting and impact analysis regarding hazards and hazardous materials. For detailed discussion about potential wildland fire hazards in the Project area, see Section 3.20, “Wildfire.”

### ***Contaminated Sites***

A records search was conducted of government databases compiled pursuant to Government Code Section 65962.5 to identify any government listed hazardous materials or waste sites located on or within a 1-mile radius of the Project area (California Department of Toxic Substances Control 2021 and SWRCB 2021). Historic cleanup sites in the vicinity of the Project site generally involve leaking underground storage tanks (LUSTs) containing petroleum products (SWRCB 2021), including:

- Walgreens Sunol (T10000006478): LUST cleanup site for diesel at 9494 Koopman Road, property owned by the San Francisco Public Utilities Commission.
- San Francisco Public Utilities Commission’s San Antonio Pump Station (T0600101185): former LUST cleanup site for diesel at 5555 Calaveras Road, which is now a closed site.

The following hazardous waste site is located approximately 0.5 mile north of the Project area:

- General Electric Hitachi – Vallecitos Nuclear Center (CAD053914206): release of polychlorinated biphenyls (PCBs) and diesel at 6705 Vallecitos Road. This case was closed in 1997 following remediation activities.

### ***Airports***

There are four public use airports in Alameda County: Hayward Executive Airport, Livermore Municipal Airport, Meadowlark Field, and the Metropolitan Oakland International Airport. The Livermore Municipal Airport, approximately 6.5 miles north of the Project area, is closest airport to the Project area.

### ***Wildland Fire Hazards***

The Proposed Project and surrounding area are not located within a Very High Fire Hazard Severity Zone (CAL FIRE 2007). The nearest fire station is the CAL FIRE Sunol Fire Station 14, located approximately 0.8 mile west of the Project area at 11345 Pleasanton Sunol Road. Section 3.20, "Wildfire" includes additional information regarding wildland fire hazards in the Project area.

## **3.9.3 Discussion of Checklist Responses**

### ***a. Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials — Less than Significant with Mitigation***

Project construction activities would require the handling of hazardous materials, such as fuels, lubricating fluids, and solvents for use with onsite construction equipment. Accidental spills or improper use, storage, transport, or disposal of these hazardous materials could result in a public hazard or the transport of hazardous materials (particularly during storm events) to the underlying soils and groundwater.

Although these hazardous materials could pose a hazard as described above, ACWD and/or its contractor(s) would be required to comply with extensive regulations so that substantial hazards would not result. All storage, handling, and disposal of these materials would be done in accordance with regulations established by the DTSC, USEPA, California Office of Emergency Services (Cal OES), Certified Unified Program Agencies, and California Occupational Safety and Health Administration (Cal/OSHA). The following BMPs, as described in Chapter 2, Table 2-5, require implementation of specific measures that would minimize the potential for releases of hazardous materials:

- BMP-4: On-site Hazardous Materials Management
- BMP-5: Vehicle and Equipment Maintenance
- BMP-6: Dust Management Controls and Air Quality Protection
- BMP-13: Standard Herbicide Use and Application Requirements

In addition, as described in Section 3.10, "Hydrology and Water Quality," the Proposed Project would require preparation and implementation of a SWPPP (**Mitigation Measure HYD-1**) to comply with applicable permits under the NPDES. The SWPPP would include appropriate spill prevention and other construction BMPs to prevent or minimize potential for releases of hazardous materials or risks to workers during construction activities.

Once construction is completed, operation and maintenance of the Proposed Project would involve ongoing vegetation management, inspection and monitoring of drop structures and the channel bank, and minor surface repairs to the access road. Control of invasive non-native species may require limited application of herbicides at the riparian/wetland enhancement areas to manage and control invasive species growth (such as Himalayan blackberry). BMP-13 specifies that only USEPA-approved herbicides for aquatic environments be used for controlling invasive plant species growth. BMP-13 also defines the conditions, extent, and general process that herbicides can be applied for the Proposed Project.

With implementation of BMPs and Mitigation Measure HYD-1, which requires preparation implementation of a SWPPP in accordance with the Project's Construction General Permit, the Project would not result in significant risks to workers, the public, or the environment from the construction- and operation-related transport, use, storage, or disposal of hazardous materials. Therefore, this impact would be **less than significant with mitigation**.

***b. Create a Significant Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment — Less than Significant with Mitigation***

As described above in item 3.9(a), Proposed Project activities would require the use, transport, and disposal of hazardous materials; however, compliance with the applicable regulations and implementation of a SWPPP (per **Mitigation Measure HYD-1**) and appropriate BMPs would ensure that no significant risks would result to construction workers, the public, or the environment from reasonably foreseeable upset or accident conditions involving the use of hazardous materials during project construction.

Operation and maintenance of the Project would be similar to existing maintenance activities and involve routine inspection and manual vegetation management along the access road and right-of-way fence line. Additional post-Project maintenance activities may involve as-needed vegetation management to maintain channel conveyance capacity and minor surface repairs to the access road. Routine maintenance activities would not result in additional risks to workers, the public, or the environment from upset or accident conditions involving the release of hazardous materials. Therefore, this impact would be **less than significant with mitigation**.

***c. Generate Hazardous Emissions or Use Hazardous Materials Within 0.25 Mile of Schools — No impact***

There are no schools that are located within 0.25 mile (1,320 feet) of the Project area. The nearest school is Sunol Glen Elementary School, which is located approximately 1.1 miles west of the Project area. As a result, there would be **no impact**.

***d. Be Located on a Listed Toxic Site, and, as a Result, Create a Significant Hazard to the Public or the Environment — Less than Significant with Mitigation***

No hazardous waste or hazardous substance sites are known to occur within the Project area. As described in Section 3.9.2, above, one listed hazardous waste or hazardous substance site is known to have occurred within a 0.5-mile radius of the Project area. The General Electric Hitachi – Vallecitos Nuclear Center reported to have released solvents, diesel, and polychlorinated biphenyls; however, the case closed in 1997 following remediation activities (SWRCB 2021).

No other known hazardous materials release sites are located upgradient of the Project site and the potential to encounter existing hazardous materials is minimal. Project construction activities would involve minimal grading and earthwork activities of shallow soils and sediment; sediment removal activities would occur to a depth of 3.5 feet, and placement of RSP would require a maximum depth of excavation of 5.5 feet. Project construction activities would occur during the summer months when the channel is dry and interaction with groundwater is not anticipated. However, in the event that contamination or hazardous materials are encountered during construction (as evident by indicators such as chemical odors or oily sheens), implementation of **Mitigation Measure HYD-1** would ensure that ACWD removes and disposes of them according to the Spill Prevention and Response Plan. If clean-up or remediation is required, ACWD would ensure that any hazardous waste materials removed during construction are handled, transported, and disposed of according to federal, state, and local requirements. With these procedures in place, impacts related to the discovery of unknown hazardous waste or hazardous substance sites within the project area would be **less than significant with mitigation**.

***e. Be Located Within an Airport Land Use Plan Area, or within 2 miles of a Public or Private Airport and Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Study Area — No Impact***

The Project area is not located within 2 miles of any public or private airport or airstrip. The closest airport, Livermore Municipal Airport in Livermore, is approximately 6.5 miles north of the Project area. The Proposed Project would not conflict with any airport land use plan or operation of nearby airports. Therefore, there would be **no impact**.

***f. Impair Implementation of or Physically Interfere with an Adopted Emergency Response or Emergency Evacuation Plan — Less than Significant with Mitigation***

Proposed construction activities are limited to the Vallecitos Channel, adjacent corridor, and associated access road. Construction vehicles and equipment would access the Project area while traveling eastbound on SR-84 from Vallecitos Lane (approximately 0.60 mile east of I-680) and from three private driveways on the south side of SR-84. Project construction-related vehicle trips would temporarily increase traffic and could result in traffic slowdowns on SR-84 during the 13-week construction period. Thus, construction-related traffic to and from the Project site could result in delays contributing to temporary impairment of an evacuation process, should the Project's activities coincide with an emergency.

As described in Section 3.17, “Transportation,” implementation of **Mitigation Measure TRA-1** would ensure that a traffic control plan is developed in coordination with Caltrans. Mitigation Measure TRA-1 provides safety measures to minimize potential impacts on local traffic patterns and maintain adequate traffic flow and emergency access during project construction activities. Implementation of this mitigation measure would minimize the potential for the Proposed Project to interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, this impact would **be less than significant with mitigation**.

***g. Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury or Death Involving Wildland Fires — Less than Significant***

For a detailed discussion about potential wildland fire hazards in the Project area, see Section 3.20, “Wildfire.”

While the Project area is not located within a designated high fire hazard area, the use of mechanized construction equipment and motorized hand tools, and temporary onsite storage of diesel fuel and other hazardous materials could pose an increased fire risk resulting in loss, injury, or death involving wildfires. ACWD would implement BMP-12 (Fire Prevention) which requires on-site fire suppression equipment, spark arrestors on all equipment with internal combustion engines, and restricts activities on high fire danger days. With implementation of this BMP, the District would minimize the risk of igniting a wildfire during both project construction and operation and maintenance of the Project. Therefore, the risk of loss, injury or death involving wildland fires from construction and operation of the Proposed Project would **be less than significant**.

*This page intentionally left blank*

### 3.10 Hydrology and Water Quality

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.10.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

##### Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation for the Proposed Project are CWA Sections 303, 401 and 402.

##### *Section 303(d)—Listing of Impaired Water Bodies*

Under CWA Section 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards); identify the pollutants causing the impairment; establish priority rankings for waters on the list, and develop a schedule for the development of control plans to improve water quality. USEPA then approves the State's recommended list of impaired waters or adds and/or removes waterbodies.

##### *Section 401*

All projects that have a federal component and may affect water quality in the state (including projects that require federal agency approval, such as issuance of a CWA Section 404 permit) also must comply with CWA Section 401. The purpose of Section 401 is to evaluate water quality when considering activities associated with dredging or placement of fill materials into waters of the United States. Section 401 compliance involves obtaining a CWA Section 401 Water Quality Certification to confirm that any such discharge will comply with the applicable provisions of the CWA, including state water quality standards. Section 401 Water Quality Certifications are issued by the RWQCBs. For the Project, ACWD would apply for Section 401 Water Quality Certifications from the San Francisco Bay RWQCB.

##### *Section 402—NPDES Permits for Stormwater Discharge*

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the NPDES, which is officially administered by USEPA. In California, USEPA has delegated its authority to the SWRCB, which, in turn, delegates implementation responsibility to the nine RWQCBs, as discussed below in reference to the Porter-Cologne Water Quality Control Act.

The NPDES program provides for both general (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. Most construction projects that disturb 1.0 or more acre(s) of land are required to obtain coverage under SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). The general permit requires that the applicant file a public notice of intent to discharge stormwater and prepare and implement a SWPPP. The SWPPP must include a site map and a description of the proposed construction activities, demonstrate compliance with relevant local ordinances and regulations, and present a list of BMPs that will be implemented to prevent soil erosion and

protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to monitor construction activities and report compliance to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

### ***State Laws, Regulations, and Policies***

#### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Act, passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the state's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Section 401, 402, and 303[d]. In general, the SWRCB manages water rights and regulates statewide water quality, whereas the RWQCBs focus on water quality within their respective regions.

The Porter-Cologne Act requires the RWQCBs to develop water quality control plans (also known as basin plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter-Cologne Act, basin plans must be updated every 3 years. Beneficial uses of the Vallecitos Channel are described in the Water Quality Control Plan for the San Francisco Bay Basin.

#### **Sustainable Groundwater Management Act**

The Sustainable Groundwater Management Act (SGMA), passed in 2014, became law in 2015 and created a legal and policy framework to locally manage groundwater sustainably. SGMA allows local agencies to customize groundwater sustainability plans to their regional economic and environmental conditions and needs, and establish new governance structures, known as Groundwater Sustainability Agencies (GSAs). SGMA requires that a groundwater sustainability plan (GSP) be adopted for high and medium priority groundwater basins in California by 2020 for basins with critical overdraft. Low and very low priority basins are not required to adopt GSPs. GSPs are intended to facilitate the use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results (e.g., chronic lowering of groundwater levels).

The Sunol Valley Groundwater Basin, within which the Proposed Project is located, is designated as a very low priority basin under SGMA (California Department of Water Resources [DWR] 2018). Therefore, a GSP is not required for this basin. However, one of the primary objectives of the Proposed Project is to provide critical flow from SBA during dry years, by way of the

Vallecitos Channel, to recharge Niles Cone Groundwater Basin. In this way, the Proposed Project directly supports sustainable local and regional groundwater management.

### ***Local Laws, Regulations, and Policies***

#### **East County Area Plan**

The *East County Area Plan* guides land use and development in unincorporated Alameda County. Goals and policies related to water resources and water quality and that are applicable to the Proposed Project include the following (Alameda County Community Development Agency Planning Department 1994):

**Goal:** To provide efficient, cost-effective, and environmentally sound storm drainage and flood control facilities.

**Policy 278:** The County shall promote flood control measures that advance the goals of recreation, resource conservation (including water quality and soil conservation), groundwater recharge, preservation of natural riparian vegetation and habitat, and the preservation of scenic values of the county's arroyos and creeks.

**Policy 281:** The County shall support and encourage the design of future flood control projects in a manner that preserves and/or restores and enhances riparian vegetation.

**Goal:** To protect and enhance surface and groundwater quality.

**Policy 306:** The County shall protect surface and groundwater resources by minimizing sedimentation and erosion through control of grading, quarrying, cutting of trees, removal of vegetation, placement of roads and bridges, use of off-road vehicles, and animal-related disturbance of the soil;

## **3.10.2 Environmental Setting**

### ***Regional Setting and Climate***

The Project site is located at the southern side of La Costa Valley, east of the Town of Sunol, in the *La Costa Valley, California* USGS 7.5-minute quadrangle. Elevation ranges from approximately 318 feet to approximately 482 feet. Areas immediately north and south of the Project site are undeveloped, and include San Antonio Reservoir and James H. Turner Dam, and approximately 16,000-acre open space that comprise the Sunol and Ohlone Regional Wilderness areas within the East Bay Regional Park District.

The Project area has a Mediterranean climate characterized by cool, wet winters and hot, dry summers. Average temperatures range from a low of 36.7 °F in January to a high of 89 °F in July (Western Regional Climate Center [WRCC] 2016). Average annual precipitation is 14.18 inches, with most of the precipitation occurring November through April (WRCC 2016).

### ***Surface Water Hydrology and Quality***

The Project site includes the Vallecitos Channel, an approximately 2.5 mile earthen engineered channel constructed approximately 50 years ago. The Vallecitos Channel follows a portion of the alignment of Vallecitos Creek, a small tributary in the Lower Alameda Creek Watershed that drains the western slopes of the Diablo Mountains. Water flows across the Project site from east to west. The creek eventually drains to Arroyo de la Laguna and Alameda Creek, and ultimately empties into the San Francisco Bay. The Project site is located within the Alameda Creek watershed (Hydrologic Unit Code 18050004).

The slope of the Vallecitos Channel is relatively flat due to a series of concrete drop structures which reduce channel slope between the structures and help control flow velocities. The slope of the channel between drop structures ranges from 0.2 to 0.9 percent, with an average of 0.7 percent. As a result, the average channel velocities are less than 3.0 feet per second over the range of flows (Waterways 2016).

The natural channel has been altered significantly to allow for the conveyance of water from the SBA downstream to the District's service area, including Fremont, Newark, and Union City. As such, water from the Bethany Reservoir, located along the western edge of the San Joaquin Valley, is released from the aqueduct when water is needed downstream and accounts for the dry-season flow in the channel. During critically dry or drought years, SBA releases to the Vallecitos Channel is the only source of water in Alameda Creek, which is known to support salmonids.

A detailed HEC-RAS hydraulic model of the Vallecitos Channel within the proposed Project area was prepared in 2016 by the District's engineering consultant Waterways Consulting, Inc. Estimates for instantaneous peak flood discharge were based on Regional Regression equations developed by the USGS for the Central Coast Region (Gotvald et al. 2012). Parameters used in the equations include (1) drainage area and (2) mean annual precipitation. Modeling results are provided below in **Table 3-8**.

**Table 3-8. Summary of Calculated Flood Peaks**

<b>Recurrence Interval</b>	<b>Peak Flood Values at the Project Site (cfs)</b>
100-yr	303.9
50-yr	230.7
10-yr	87.4
2-yr	12.5

cfs = cubic feet per second

Source: *Waterways 2016*

Although the channel within the Project area rarely receives significant runoff from large storm events within the watershed, the more commonly occurring peak flows are the result of planned transfer releases and "blow-off" events from the SBA that discharge into the Vallecitos Channel

at the upstream extent of the Project area. Past flow records from the District indicate that sustained flows during SBA transfers are often as high as 40 cubic feet per second (cfs), while blow-off events have reached 120 cfs.

### ***Stormwater***

With the exception of thirteen concrete drop structures periodically spaced throughout the channel, the Project area is undeveloped. Surrounding land use is unimproved open space grazing land. Stormwater generated on the Project site either infiltrates into the soil and/or sheet-flows to the channel. Drainage on the site and surrounding area is generally directed toward the channel. Several culverts convey stormwater flow from adjacent minor drainages beneath the District's access road and into the Vallecitos Channel.

### ***Groundwater Levels, Flows and Quality***

The Project site is located within the Sunol Valley Basin – East Bay Plain Subbasin (basin no. 2-011). Groundwater flow direction may be affected by surface topography, hydrology, hydrogeology, soil conditions, and nearby wells. Shallow groundwater beneath the Project site is generally anticipated to flow in a westward direction toward the Town of Sunol and Alameda Creek.

SBA water supply is a critical component in the District's management of the Santa Clara Valley – Niles Cone Subbasin, a medium priority basin under SGMA (DWR 2018). Groundwater accounts for approximately one-third of the District's water supply. The District adds fresh water to the Niles Cone Groundwater Basin through the Quarry Lakes Regional Recreation Area and adjacent areas. Recharging the aquifer with fresh water creates a pressure gradient that pushes brackish groundwater back to San Francisco Bay. The District withdraws brackish water using the Aquifer Reclamation Program wells, which feed the Newark Desalination Facility. This cycle of fresh water recharge and brackish water extraction is steadily restoring the Niles Cone Groundwater Basin. The Vallecitos Channel has an important role in conveying SBA water deliveries during dry and critically dry years, when the Niles Cone becomes drawn down, for drought recovery, for emergency operations, and for climate change adaption to protect against saline intrusion from the San Francisco Bay and sea-level rise.

### ***Floodplains, Tsunamis, and Dam Inundation***

The Project site is not located within a FEMA flood hazard zone or within a tsunami hazard zone (California Geological Survey [CGS] 2021). The Project site is outside of the dam breach inundation zone for San Antonio Reservoir and Del Valle Reservoir (DWR 2021).

### 3.10.3 Discussion of Checklist Responses

**a. *Violate Water Quality Standards, or Waste Discharge Requirements or Otherwise Substantially Degrade Water Quality — Less than Significant with Mitigation***

The Vallecitos Channel and Vallecitos Creek are not listed as impaired under the CWA Section 303(d) list (SWRCB 2016). Downstream receiving waterbodies, Arroyo De La Laguna and Alameda Creek, are listed as impaired for diazinon. Diazinon is an insecticide, whose principal source in this area is urban runoff/storm sewers. The Proposed Project does not include insecticide use and would not contribute additional inputs of diazinon to downstream waterbodies.

During project construction activities, water quality could be temporarily reduced in the immediate Project area and areas downstream because ground-disturbing activities could result in the release of fine sediment and/or other contaminants in the Vallecitos Channel. Implementation of the following BMPs (described in Chapter 2, Table 2-5) would reduce the potential for adverse water quality impacts during project construction:

- BMP-1: Construction Work Windows
- BMP-2: Area of Disturbance
- BMP-3: Erosion and Sediment Control
- BMP-4: On-site Hazardous Materials Management
- BMP-5: Vehicle and Equipment Maintenance
- BMP-7: Work Site Housekeeping (trash removal)
- BMP-8: Fills, Spoils, and Stockpile Materials
- BMP-13: Standard Herbicide Use and Application Requirements

For example, BMP-1 would require that ground-disturbing activities occur during the dry season in the channel, which would minimize potential for sediment and other construction-related water quality contaminants to be transported downstream. Similarly, BMP-3 would require implementation of erosion and sediment control measures, while BMP-4 would require on-site hazardous materials management, thereby limiting potential for hazardous materials to be accidentally released or discharged to the surface water system.

Additionally, because the Proposed Project would disturb greater than one acre of land, it would be subject to the NPDES General Construction Permit, which requires preparation of a SWPPP. Implementation of **Mitigation Measure HYD-1** would ensure that ACWD prepares and implements a SWPPP in accordance to the Project's NPDES Construction General Permit. The SWPPP would include erosion control and hazardous materials management measures that would further ensure that the Proposed Project does not result in substantial adverse effects on water quality.

**Mitigation Measure HYD-1: Prepare and Implement SWPPP**

Consistent with the requirements of the SWRCB's NPDES Construction General Permit, ACWD or its contractor will submit a notice of intent to the SWRCB's Division of Water Quality, develop a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs to prevent discharges of non-point source pollutants (including chemicals, fuels, lubricants) in Vallecitos Channel. The San Francisco Bay RWQCB would review the SWPPP to ensure compliance with the general permit.

The SWPPP will contain guidelines for cleanup and disposal of spilled and leaked materials at the project site. Recommended BMPs that will be included in the SWPPP are listed below; however the measures may be altered, supplemented or deleted during the RWQCB's review process.

- Contractor's designated field personnel will be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills.
- Equipment and materials for cleanup of spills will be available on site, and spills and leaks will be cleaned up immediately and disposed of according to the following guidelines:
- For small spills on impervious surfaces, absorbent materials will be used to remove the spill, rather than hosing it down with water.
- For small spills on pervious surfaces such as soil, the spill will be excavated and properly disposed of rather than being buried.
- Absorbent materials will be collected and disposed of properly and promptly.
- Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means.
- Spill response kits will be on hand at all times while hazardous materials are in use (e.g., at crew trucks and other logical locations). All field personnel will be advised of these locations.
- ACWD staff or subcontractor(s) will routinely inspect the work site to verify that spill prevention and response measures are properly implemented and maintained.

Overall, with implementation of BMPs and **Mitigation Measure HYD-1**, the Proposed Project would not violate water quality standards or waste discharge requirements. Following completion of project construction activities, the Proposed Project's bank stabilization treatments and road drainage improvements would provide long-term beneficial effects on water quality by reducing existing streambank erosion. As a result, this impact would be **less than significant with mitigation**.

***b. Substantially Decrease Groundwater Supply or Interfere Substantially with Groundwater Recharge, such that the Project may Impede Sustainable Groundwater Management of the Basin — No Impact***

The Proposed Project would not utilize groundwater supplies or involve actions that would affect groundwater resources during construction or operation. Additionally, the Proposed Project would not increase impervious surface area such that groundwater recharge would be substantially interfered.

Rather, as described in Chapter 2 and in Section 3.10.2, the Vallecitos Channel plays an integral role in management of the Niles Cone Groundwater Basin as the channel conveys SBA water imports during dry and critically dry years when the Niles Cone Groundwater Basin becomes drawn down and is important for drought recovery. With ongoing climate change, droughts are anticipated to become more severe and occur more frequently. The Vallecitos Channel is considered an essential component of ACWD's climate change adaption planning as the channel will continue to convey SBA water for water supply purposes and help protect the basin from saline intrusion associated with sea-level rise. Using the Vallecitos Channel to convey SBA water supplies supports the District's Groundwater Management Plan Alternative for the Niles Cone Groundwater Basin under the SGMA. For these reasons, the Proposed Project would have a beneficial effect on managing groundwater resources sustainably in the region as the Vallecitos Channel is necessary for continued conveyance of SBA water supplies. The Project would have no adverse effect (**no impact**) on groundwater resources.

***c. Substantially Alter the Existing Drainage Pattern of the Project Area, including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, which would:***

***i. Result in Substantial Erosion or Siltation — Less than Significant with Mitigation***

As described in Chapter 2, *Project Description*, the Proposed Project would arrest and restore areas along the Vallecitos Channel where severe streambank erosion is occurring. Stabilizing currently eroding banks within the Project area would decrease sediment load to the Vallecitos Channel and thus decrease downstream sediment deposition in the Vallecitos Channel, Vallecitos Creek, and Alameda Creek. In addition, the channel cross section would be widened at RSP treatment areas to a minimum of 6 feet and thereby restore the channel geometry closer to its as-built design dimensions and reduce the potential for streamflow to deflect off RSP sections into the opposing bank.

During construction, drainage patterns would be temporarily altered by ground-disturbing activities, such as excavation and use of heavy construction equipment within the channel. These activities could cause or lead to erosion or siltation because loosened soil may be more easily dislodged and transported downstream by streamflows. However, as described in item 3.10(a) above, the District would be required to prepare and implement a SWPPP for NPDES compliance per **Mitigation Measure HYD-1**, and would implement the following BMPs:

- BMP-1: Construction Work Windows
- BMP-2: Area of Disturbance
- BMP-3: Erosion and Sediment Control
- BMP-8: Fills, Spoils, and Stockpile Materials

Implementation of the above-listed BMPs and Mitigation Measure HYD-1 would ensure compliance with these regulatory requirements and would avoid and minimize potential effects of on- and off-site erosion and siltation. Overall, the long-term effects of the Proposed Project on drainage patterns would be largely beneficial, and short-term construction effects would not be significant with implementation of BMPs and regulatory requirements. Therefore, this impact would be **less than significant with mitigation**.

**ii. Substantially Increase the Rate or Amount of Surface Runoff in a Manner which would Result in Flooding — *Less than Significant***

The Proposed Project does not include construction of structures or other impermeable features. As described in Chapter 2, *Project Description*, proposed bank stabilization treatments include short sections of partial RSP along the channel's left bank toe and sections of full bank RSP where severe bank retreat has eroded the access road such that the road is impassable to vehicles. These more hardened features would occur only on the left bank for a total treatment length of 911 linear feet (0.133 acre) over the 7,980-foot total Project length. In addition, RSP treatment areas would actually slow the velocity of concentrated runoff or sheet flow, which in turn increases the potential for infiltration through interstitial spaces between the rocks. Overall, changes to the rate or amount of surface runoff would be negligible and would not result in on- or off-site flooding. Therefore, this impact would be **less than significant**.

**iii. Create or Contribute Runoff Water which would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff — *Less than Significant with Mitigation***

The Proposed Project would restore channel streamflow conveyance by removing dense instream vegetation and accumulated sediment. This would allow water to flow more freely through the Project reach to areas downstream. As such, the Proposed Project would improve the capacity and function of the Vallecitos Channel. This would result in a beneficial effect on the stormwater conveyance.

During construction, the Proposed Project would involve the use of heavy construction equipment containing hazardous materials (e.g., fuel, oil), which could potentially lead to accidental releases of such pollutants. As described under item 3.9(a) above, the Proposed Project would implement BMP-1, BMP-4, and BMP-5 to appropriately manage hazardous materials. The Proposed Project would also be required to prepare and implement a SWPPP per **Mitigation Measure HYD-1**, which would include hazardous materials management and good site housekeeping requirements. With implementation of these BMPs and Mitigation Measure HYD-1, accidental releases of hazardous materials would be unlikely and construction activities

would not result in substantial discharges of polluted runoff. Overall, this impact would be **less than significant with mitigation**.

**iv. Impede or Redirect Flood Flows — *Less than Significant***

The Proposed Project would restore channel capacity to near as-built conditions to accommodate scheduled SBA releases and emergency blow-off events of 120 cfs (approximate), which would reduce the potential for flooding in the area. The in-channel riparian/wetland benches would also be inundated under typical SBA releases but would not significantly impede flood flows nor reduce local flooding risks. The Proposed Project would not construct structures in the flood hazard area. Therefore, this impact would be **less than significant**.

**d. Risk Release of Pollutants due to Project Inundation in Flood Hazard, Tsunami, or Seiche Zones — No Impact**

The Project area is not in a location that would be affected by seiche, tsunami, or mudflow. Additionally, the Proposed Project would not introduce any land uses or features that could contribute to seiche, tsunami, or mudflows. Therefore, **no impact** would occur.

**e. Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan — No Impact**

As discussed in item 3.10(b) above, the Vallecitos Channel conveys SBA water imports during dry and critically dry years to help supplement fresh water supply in the Niles Cone Groundwater Basin. As such, operation of the Vallecitos Channel supports the District's Groundwater Management Plan Alternative for the Niles Cone Groundwater Basin under SGMA. The Proposed Project would help ACWD protect the groundwater basin and thus have beneficial effect on groundwater resources. Therefore, **no impact** would occur.

*This page intentionally left blank*

### 3.11 Land Use and Planning

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.11.1 Regulatory Setting

There are no federal or state laws, regulations, or policies regarding land use and planning that are applicable to the Proposed Project.

##### ***Local Laws, Regulations, and Policies***

###### East County Area Plan

The *East County Area Plan* guides land use and development in unincorporated Alameda County. According to Figure 4 (Open Space Diagram) of the plan, the Project area's land use designation is Resource Management. This designation permits agricultural uses, recreational uses, habitat protection, watershed management, public and quasi-public uses, areas typically unsuitable for human occupation due to public health and safety hazards such as earthquake faults, floodways, unstable soils, or areas containing wildlife habitat and other environmentally sensitive features, secondary residential units, active sand and gravel and other quarries, reclaimed quarry lake, and similar compatible uses. This designation is intended mainly for land designated for long-term preservation as open space but may include low intensity agriculture, grazing, and very low density residential use (Alameda County Community Development Agency Planning Department 1994).

General open space goals, policies, and programs related to land use and applicable to the Proposed Project include the following:

**Goal:** To protect regionally significant open space and agricultural land from development.

**Policy 52:** The County shall preserve open space areas for the protection of public health and safety, provision of recreational opportunities, production of natural resources (e.g., agriculture, windpower, and mineral extraction), protection of

sensitive viewsheds, preservation of biological resources, and the physical separation between neighboring communities.

**Policy 53:** The County shall preserve a continuous band of open space consisting of a variety of plant communities and wildlife habitats to provide comprehensive, rather than piecemeal, habitat conservation for all of East County. This open space should, as much as possible, be outside of the Urban Growth Boundary and contiguous to large open space areas of Contra Costa, Santa Clara, and San Joaquin Counties.

**Program 49:** The County shall develop management guidelines for lands designated “Resource Management” for the purpose of protecting watershed lands from potential degradation resulting from incompatible uses.

**Policy 116:** To the maximum extent possible, development shall be located and designed to conform with rather than change natural landforms. The alteration of natural topography, vegetation, and other characteristics by grading, excavating, filling or other development activity shall be minimized. To the extent feasible, access roads shall be consolidated and located where they are least visible from public view points.

**Policy 117:** The County shall require that where grading is necessary, the off-site visibility of cut and fill slopes and drainage improvements is minimized. Graded slopes shall be designed to simulate natural contours and support vegetation to blend with surrounding undisturbed slopes.

**Policy 118:** The County shall require that grading avoid areas containing large stands of mature, healthy vegetation, scenic natural formations, or natural watercourses.

### 3.11.2 Environmental Setting

The Vallecitos Channel and overall Project area is located in Vallecitos Valley in unincorporated Alameda County, south of SR-84, east of I-680, and north of the San Antonio Reservoir. Land uses surrounding the Project area include mixed grassland/rangeland for cattle grazing, undeveloped easements beneath utility powerlines, horse stable and training facility, a recreational paintball facility, a few residences to the north, and watershed lands owned by the City and County of San Francisco to the south. According to the *East County Area Plan*, land surrounding the Project area are designated as Resource Management and Water Management (Alameda County Community Development Agency Planning Department 1994). As described in Chapter 2, *Project Description*, ownership and easement along and adjacent to the Vallecitos Channel varies between ACWD right-of-way (via condemnation or easement), area of common use (via joint use agreement between the ACWD and PG&E), and private land owners.

### 3.11.3 Discussion of Checklist Responses

#### ***a. Divide an Established Community — No Impact***

The Project area is located in an undeveloped area east of the unincorporated town of Sunol and is not within an established community. Proposed Project treatments and associated maintenance activities would be conducted within and along the Vallecitos Channel and ACWD's adjacent access road. Access to the Project site would occur via three private driveways on the south side of SR-84. The Proposed Project includes stabilizing the channel bank at several locations, clearing vegetation and sediment in the channel to reduce erosion and localized flooding, repairing the existing access road, and constructing in-channel benches to enhance riparian/wetland habitat. None of the proposed treatments or associated maintenance activities would divide an established community. Therefore, there would be **no impact**.

#### ***b. Cause a Significant Environmental Impact due to a Conflict with Land Use Plans, Policies or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect — No Impact***

Land use in the Project area is designated as Resource Management in the *East County Area Plan* (Alameda County Community Development Agency Planning Department 1994). As described above, project construction activities would be limited to the existing channel, the District's access road, and some private properties where temporary access and staging would occur. Proposed treatments are intended to meet multiple objectives including but not limited to restoring the ACWD's access road, meeting ACWD's water supply conveyance needs, reducing flood impacts to adjacent private properties, containing and conveying emergency discharge events, and improving water quality. The proposed treatments would not conflict with the allowable uses for lands designated as Resource Management including but not limited to watershed management and habitat protection (see Section 3.11.1 above for a complete list of allowable uses). As described in Section 3.2, "Agriculture and Forestry Resources," similar to existing conditions, grazing practices would continue throughout the Project area after construction is completed. Therefore, there would be **no impact** related to conflicts with land use plans and policies.

*This page intentionally left blank*

## 3.12 Mineral Resources

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.12.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

There are no federal laws, regulations, or policies regarding mineral resources that are applicable to the Proposed Project.

#### ***State Laws, Regulations and Policies***

##### Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 requires the State Mining and Geology Board to adopt state policies for the reclamation of mined lands and the conservation of mineral resources.

As required by SMARA, the state has established the California Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urbanization or other irreversible land uses that would prevent mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and nonfluid mineral fuels.

#### ***Local Laws, Regulations, and Policies***

There are no local laws, regulations, or policies regarding mineral resources that are applicable to the Proposed Project.

### 3.12.2 Environmental Setting

Sand and gravel deposits are the most significant mineral resources in Alameda County and a main source of aggregate for the San Francisco Bay Area (CDMG 1996). The California Department of Conservation, Division of Mines and Geology (CDMG), have mapped these mineral deposits as Mineral Resources Zones (MRZs) that include the following (CDMG 2000):

- MRZ-1: Areas where sufficient information suggests that no significant aggregate deposits are present, or where it is determined that little likelihood exists for their presence;
- MRZ-2: Areas where sufficient information suggests that significant aggregate deposits are present, or where it is determined that a high likelihood for their presence exists;
- MRZ-3: Areas containing aggregate deposits, the significance of which cannot be determined;
- MRZ-4: Areas where available information is insufficient for assignment to any other zone.

The western extent of the Project area including the ACWD's access road is mapped as MRZ-3, which corresponds with areas containing aggregate deposits, the significance of which cannot be determined (CDMG 1996). The Proposed Project's treatment areas along the Vallecitos Channel are not classified by CDMG. Within the Project vicinity, the majority of aggregate deposits are located within Alameda Creek, downstream of the Vallecitos Channel.

### 3.12.3 Discussion of Checklist Responses

#### ***a, b. Result in the Loss of Availability of a Known Mineral Resource of Value to the Region or a Locally-Important Mineral Resource Recovery Site — No Impact***

Construction vehicles and equipment would use the ACWD's access road, a portion of which is mapped by the CDMG as MRZ-3, which corresponds to areas containing aggregate deposits, the significance of which is unknown. Potential impacts associated with the loss of known mineral resources could occur if the Project impeded active mining operations such that mineral resources were temporarily unavailable. However, use of the ACWD's access road for construction access purpose would not impede or interfere with active mining operations. Further, the majority of the Project area does not contain any classified mineral resources. As such, implementation of the Proposed Project would not result in the loss or availability of a known mineral resources or a locally important mineral resource recovery site. Therefore, the Proposed Project would have **no impact** on the availability of mineral resources.

### 3.13 Noise

Significance Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, would the project expose people residing or working in the project site to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.13.1 Noise Concepts and Terminology

Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). Different types of measurements are used to characterize the time-varying nature of sound. Below are brief definitions of these measurements and other terminology used in this section.

**Sound** is a vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism, such as the human ear or a microphone.

**Noise** is sound that is loud, unpleasant, unexpected, or otherwise undesirable.

**Decibel (dB)** is a dimensionless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals. The dB measurement is used to quantify sound intensity.

**A-weighted decibel (dBA)** is an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

**Maximum sound level ( $L_{\max}$ )** is the maximum sound level measured during the measurement period.

**Equivalent sound level ( $L_{\text{eq}}$ )** is the equivalent steady-state sound level that, in a stated period of time, would contain the same acoustical energy as a time-varying sound level during that same period of time.

**Community Noise Equivalent Level (CNEL)** is the average A-weighted noise level during a 24-hour day, obtained after adding 5 decibels to measurements taken in the evening (7:00 to 10:00 p.m.) and 10 decibels to measurements taken between 10:00 p.m. and 7:00 a.m.

**Day/Night Noise Level ( $L_{\text{dn}}$ )** is the average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.

In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level. **Table 3-9** presents example noise levels for common noise sources, the levels are measured adjacent to the source.

**Table 3-9. Examples of Common Noise Levels**

Source	Noise Level (dBA)
Weakest sound heard by average ear	0
Whisper	30
Normal conversation	60
Ringling telephone	80
Power lawnmower	90
Tractor	96
Hand drill	98
Bulldozer	105
Chain saw	110
Ambulance siren	120
Jet engine at takeoff	140

Source: National Center of Environmental Health 2019

The term *noise-sensitive land uses*, also referred to in this section as *sensitive receptors*, refers to residences, schools, hospitals, and other similar locations where excess noise would adversely affect normal functions.

## ***Vibration***

Ground-borne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration may be composed of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hertz (Hz). Most environmental vibrations consist of a composite, or “spectrum,” of many frequencies. The normal frequency range of most ground-borne vibrations that can be felt generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz. Vibration information for this analysis has been described either in terms of the peak particle velocity (PPV), measured in inches per second (in/sec), or in terms of the vibration level measured with respect to root-mean-square vibration velocity in decibels (VdB), with a reference quantity of 1 micro-inch per second.

Vibration energy dissipates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. High-frequency vibrations decrease much more rapidly than do those characterized by low frequencies, so that in a far-field zone distant from a source, the vibrations with lower frequency amplitudes tend to dominate. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building, a ground-to-foundation coupling loss (i.e., loss that occurs when energy is transferred from the ground to the building) usually results, but the vibration also can be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as rattling of windows, shaking of loose items, or the motion of building surfaces. In some cases, the vibration of building surfaces also can be radiated as sound and heard as a low-frequency rumbling noise, known as ground-borne noise.

Groundborne vibration is generally limited to areas within a few hundred feet of certain types of industrial operations and construction/demolition activities, such as pile driving. Road vehicles rarely create enough groundborne vibration amplitude to be perceptible to humans unless the receiver is in immediate proximity to the source or the road surface is poorly maintained and has potholes or bumps. Human sensitivity to vibration varies by frequency and by receiver. Generally, people are more sensitive to low-frequency vibration. Human annoyance also is related to the number and duration of events; the more events or the greater the duration, the more annoying it becomes.

### **3.13.2 Regulatory Setting**

#### ***Federal Laws, Regulations, and Policies***

No federal laws, regulations, or policies for construction-related noise and vibration apply to the proposed project. The Federal Transit Administration (FTA) Guidelines for Construction Vibration in *Transit Noise and Vibration Impact Assessment* state that, for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA  $L_{eq}$  should be used for residential areas (FTA 2006).

For construction vibration impacts, the FTA guidelines use an annoyance threshold of 80 VdB for infrequent events (fewer than 30 vibration events per day) and damage thresholds of 0.3 in/sec PPV for engineered concrete and masonry structures and 0.12 in/sec PPV for buildings extremely susceptible to vibration damage (FTA 2006).

### ***State Laws, Regulations, and Policies***

California requires each local government entity to implement a noise element as part of its general plan. Title 4 of the California Administrative Code presents guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

### ***Local Laws, Regulations, and Policies***

#### **East County Area Plan**

The *East County Area Plan* (Alameda County Community Development Agency Planning Department 1994) contains the following objectives, policies, and actions that may be relevant to the Proposed Project:

**Goal:** To minimize East County residents' and workers' exposure to excessive noise.

**Policy 288:** The County shall endeavor to maintain acceptable noise levels throughout East County.

**Policy 289:** The County shall limit or appropriately mitigate new noise-sensitive development in areas exposed to projected noise levels exceeding 60 dB based on the California Office of Noise Control Land Use Compatibility Guidelines.

**Policy 290:** The County shall require noise studies as part of development review for projects located in areas exposed to high noise levels and in areas adjacent to existing residential or other sensitive land uses. Where noise studies show that noise levels in areas of existing housing will exceed "normally acceptable" standards (as defined by the California Office of Noise Control Land Use Compatibility Guidelines), major development projects shall contribute their prorated share to the cost of noise mitigation measures.

#### **Alameda County Municipal Code**

The noise ordinance in the Alameda County Municipal Code Section 6.60.070 provides an exception for construction or maintenance and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interests of the public and to protect the public health, welfare and safety. Construction activities conducted between 7:00 a.m. and 7:00 p.m. on weekdays and from 8:00 a.m. and 5:00 p.m. on weekends are also exempt.

### 3.13.3 Environmental Setting

The Project site is located in a rural area near SR-84, agricultural areas, a paintball facility, and natural areas. Ambient noise at the Project site is influenced by noise from vehicular traffic on SR-84 and nearby agricultural, residential activities, and noise from the paintball facility. Noise-sensitive receptors in the Project area are the nearby rural residences and users of the paintball facility. A portion of the Project site occurs on these properties. Specifically, the temporary staging areas and the Project's temporary construction access routes shown in Figure 2-4 would traverse private properties including the paintball facility. For purposes of the noise analysis, the distance to the residences is used to determine noise levels. The paintball facility is within 50 feet of the Project work areas.

### 3.13.4 Discussion of Checklist Responses

***a. Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies — Less than Significant with Mitigation***

The Proposed Project would generate noises associated with construction activities (e.g., grading and material hauling) that would be temporary and would cease once construction is complete. Construction activities would primarily occur during weekdays; however, some weekend work may be necessary. Following construction, maintenance-related noise sources would include periodic vehicle traffic and construction equipment for maintenance of the stream channel.

Noise from operation of construction equipment could affect sensitive receptors (e.g., residents) in the project vicinity. Construction and material hauling activities at the Vallecitos Creek could be less than 50 feet away from the paintball facility. Note that the paintball facility mostly has business patrons on weekends when minimal construction activities are anticipated to occur. The nearest residences are 75 feet from access roads and over 1,400 feet from Project work areas. Using the two noisiest pieces of equipment, a jackhammer and excavator, the noise at 48.7 feet from the Project work area would experience noise at 90 dBA. While few business patrons are anticipated to be present at the paintball facility during weekdays when the majority of construction work occurs, any sensitive receptors located near the edge of the paintball facility may be within this range. Implementation of **Mitigation Measure NOI-1** would ensure that the noise at the paintball facility is reduced to acceptable levels.

As described in Section 3.13.1, noise ordinance in the Alameda County Municipal Code limits construction activities to 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on weekends. In accordance with Municipal Code Section 6.60.070, Exceptions, a project proponent could still be in compliance with the County Noise Ordinance when conducting work outside those hours if the work is for a public agency or utility. Construction that complies with the time-of-day restrictions for construction activities would result in less-than-significant noise impacts with regard to the generation of noise in excess of thresholds. As indicated in BMP-1

(Construction Work Windows) the Proposed Project would comply with the County's Noise Ordinance. No nighttime work is anticipated. Therefore, given the time restrictions and the exemption for public agencies and utilities, the Proposed Project would be in compliance with applicable thresholds, and this impact would be **less than significant with mitigation**.

**Mitigation Measure NOI-1: Coordinate Construction Noise with Paintball Facility Use.**

Prior to construction, ACWD or its contractor(s) will prepare and implement a noise reduction plan to ensure that construction noise levels are below 90 dBA and vibration levels below 80 VdB for users of the paintball facility. This may be achieved through any combination of the following measures:

- Install noise barriers or other noise reduction measures such as using enhanced muffler systems, using sound aprons on equipment, or attaching shields to equipment to ensure that the paintball facility noise levels are below 90 dBA and 80 VdB.
- Coordinate with the paintball facility to ensure that no sensitive receptors are within the 90 dBA and 80 VdB range (or 48.7 feet of the channel work area) during construction of treatments immediately downstream of drop structure #11 (treatments #2 through 11a as shown in Figure 2-5).

**b. Generation of Excessive Groundborne Vibration or Groundborne Noise Levels — Less than Significant with Mitigation**

Vibration thresholds for buildings occur at a PPV of 0.12 inch per second (in/sec) for buildings that are extremely susceptible to vibration damage; the human annoyance threshold for infrequent events is 80 VdB. Vibration and groundborne noise levels were estimated following methods described in the *FTA Noise and Vibration Impact Assessment* (FTA 2018) to determine the PPV that could affect buildings and the VdB for annoyance, since there are no applicable County vibration-related thresholds or recommended methodology. The analysis assumed that the equipment working nearest to residences and with the greatest vibration potential would have vibration sound levels similar to those of a bulldozer. **Table 3-10** shows relevant parameters for the excavator, which is assumed to have the greatest potential for vibration, and distance to sensitive receptors that would be required to be below vibration thresholds.

**Table 3-10. Construction Equipment and Vibration Distances**

Equipment	PPV at 25 feet	Distance to PPV of 0.12 in/sec	Noise Vibration Level at 25 feet	Distance to Noise Vibration of 80 VdB
Excavator	0.089	14.6 feet	87	42.8 feet

*Note: Calculations are provided in Appendix G.*

There are no buildings located within the building vibration damage threshold distance. Sensitive receptors using the paintball facility may experience some vibrations above the annoyance level of 80 VdB. Implementation of **Mitigation Measure NOI-1** would ensure that the vibration levels are reduced below the vibration annoyance levels at the paintball facility. With implementation of **Mitigation Measure NOI-1**, this impact would be **less than significant with mitigation**.

***c. For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan Area, or, within 2 Miles of a Public Airport or Public-Use Airport, Would the Project Expose People Residing or Working in the Project Site to Excessive Noise Levels — No Impact***

The Proposed Project is not located within an airport land use plan area or within 2 miles of a public airport or private airport or airstrip. Livermore Municipal Airport is the closest airport (6 miles away) and the Project is not within that airport's Airport Influence Area, Airport Protection Area, or 55 CNEL Noise Contour (Alameda County 2012). There would be **no impact** related to airport noise exposure.

*This page intentionally left blank*

### 3.14 Population and Housing

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.14.1 Regulatory Setting

There are no federal, state or local laws, regulations, or policies regarding population and housing that are applicable to the Proposed Project.

#### 3.14.2 Environmental Setting

The Project is located in the Vallecitos Valley of unincorporated Alameda County, east of I-680 and south of SR-84 on predominantly undeveloped lands. The Project area is limited to the Vallecitos Channel and the ACWD's access road. Temporary access to the Project area would occur along three private driveways accessible from SR-84. The nearest urban areas are the unincorporated town of Sunol, approximately 3 miles west of the Project area, and the city of Fremont, about 4 miles west of the Project area.

In 2020, Alameda County's population was estimated at 1,670,834 residents and had approximately 611,752 housing units. Between 2010 and 2020, the total population of Alameda County increased by approximately 11 percent, and the total number of housing units increased by approximately 5 percent (California Department of Finance 2020).

### 3.14.3 Discussion of Checklist Responses

#### ***a-b. Induce Population Growth or Displace Housing or Population — No Impact***

The Proposed Project would not involve any activities that would directly increase population growth, such as new housing. It is expected that the local or regional labor force would be sufficient to meet the construction workforce demand associated with the Proposed Project. As a result, the Proposed Project would not result in a substantial increase in Alameda County's population. No existing housing would be displaced that would necessitate construction of replacement housing, and no people would be displaced. Therefore, the Proposed Project would have **no impact** with respect to population and housing.

### 3.15 Public Services

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.15.1 Regulatory Setting

There are no federal, state or local laws, regulations, or policies are applicable to public services in relation to the Proposed Project.

#### 3.15.2 Environmental Setting

The Proposed Project is located in Vallecitos Valley in an unincorporated area of Alameda County. The Project area is approximately 3 miles east of Sunol. Existing land use and land cover surrounding the Project area include mixed grassland/rangeland for cattle grazing, undeveloped easements beneath utility powerlines, horse stable and training facility, and a recreational paintball facility. The paintball facility and two private residences are located along the three private driveways on the south side of SR-84.

### ***Fire Protection Services***

CAL FIRE provides fire protection in the Project area. The closest CAL FIRE station to the Project area is the Sunol Fire Station 14, which is located approximately 0.8 miles west of the Project area at 11345 Pleasanton Sunol Road. CAL FIRE would be the first response team in the event of a fire emergency in the Project area.

### ***Law Enforcement and Emergency Services***

In general, law enforcement is provided by the Alameda County Sheriff's Office, which provides law enforcement services to unincorporated communities in Alameda County, including the Project area. The closest sheriff's office is located at 39439 Paseo Padre Parkway in Fremont, approximately 6.6 miles southwest of the Project area.

### ***Hospitals***

The nearest hospitals to the Proposed Project are located in Fremont (Washington Hospital) and Livermore (Stanford Health Care).

### ***Schools and Other Public Facilities***

There are no schools that are located within 0.25 mile (1,320 feet) of the Project area. The closest school is Sunol Glen Elementary School, which is located approximately 1.1 west of the Project area. The closest existing facility to the Project area is the Sunol Paintball Outdoor Park, which is located within the boundaries of Proposed Project activities. No parks are located near the Proposed Project.

## **3.15.3 Discussion of Checklist Responses**

### ***a. Result in Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities or a Need for New or Physically Altered Governmental Facilities — No Impact***

As described in Section 3.14, "Population and Housing," the Proposed Project would not involve construction of housing and would not increase population. Therefore, the Proposed Project would not increase demand for public services over the long term. Additionally, the Proposed Project would not construct any new commercial buildings that would create new employment opportunities or encourage individuals to move to the Project area. Following construction, maintenance of the Vallecitos Channel would involve periodic vegetation management activities that would be conducted by ACWD's staff.

During construction, ACWD and/or its contractor(s) would be required to comply with the California Fire Code and portions of the Public Resources Code related to the operation of combustion-engine equipment in wildland fire hazard areas (see item 3.8[h] in Section 3.9, “Hazards and Hazardous Materials”). Compliance with these regulations would minimize the potential for construction activities to ignite a fire that could result in a call for service from CAL FIRE. Moreover, even if the Proposed Project were to require a response from the fire department during construction, it would be an isolated event (i.e., not a long-term increase in service demand) that would not result in the need to construct new or expanded public facilities. The Public access to the site is prohibited with access controlled through a series of locked gates. The Proposed Project would not be expected to require police protection service during construction or operation.

Because no increase in population would result, the Proposed Project would not result in substantial effects on parks, schools, or other public facilities (e.g., hospitals). The Proposed Project would have **no impact** on public services.

*This page intentionally left blank*

### 3.16 Recreation

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.16.1 Regulatory Setting

There are no federal, state or local laws, regulations, or policies regarding recreation that are applicable to the Proposed Project.

#### 3.16.2 Environmental Setting

Existing accessible open spaces with recreational opportunities near the Project area are limited. The Sunol Paintball Outdoor Park facility is the only recreational facility located within the Project vicinity. An outdoor rodeo area is located on the same parcel as the paintball park but is no longer open for public events. The East Bay Regional Park District (EBRPD) operates two nearby regional parks including the Pleasanton Ridge Regional Park, which is located approximately 1 mile northwest of the Project area and the Sunol Regional Wilderness area which is approximately 4.25 miles south of the Project area.

#### 3.16.3 Discussion of Checklist Responses

##### ***a. Increase Use of Existing Parks or Recreational Facilities — Less than Significant***

As described in Section 3.14, "Population and Housing," the proposed Project would not involve construction of housing and would not increase population. Therefore, the Project would not increase the use of existing parks or recreational facilities in the long-term.

While the Project includes the southern portion of the Sunol Paintball Outdoor Park facility and the facility's driveway would be used to access the Project area along the downstream end of the Vallecitos Channel near Drop Structure #13, the paintball facility will remain open for business throughout project construction activities. For this reason and because Project

construction activities would be temporary (approximately 13 weeks) and work within the downstream portion of the Vallecitos Channel would be even shorter, substantial deterioration of the paintball facility would not occur to the degree that recreationists would seek out other paintballing opportunities at other recreational facilities. Therefore, this impact would be **less than significant**.

***b. Include Recreational Facilities or Require the Construction or Expansion of New or Altered Recreational Facilities that Might have an Adverse Physical Effect on the Environment — Less than Significant with Mitigation***

The Proposed Project would not construct or expand recreational facilities, as proposed treatments would be primarily confined to the Vallecitos Channel and the ACWD's access road. However, as noted above in item 3.15(a), the Project includes temporary staging on a portion of the Sunol Paintball Outdoor Park facility and use of the road leading to the paintball facility during construction. As described in Section 3.17, "Transportation," ACWD would implement **Mitigation Measure TRA-1 (Traffic Control Plan)** which requires ACWD to coordinate construction activities with adjacent property owners including the Sunol Paintball Outdoor Park to ensure the safety of business patrons and employees at the facility. Once construction is completed, proposed treatments would restore the channel's cross-sectional area to increase channel capacity, potentially reducing flood impacts to the adjacent paintball facility during storm events. As a result, this impact would be **less than significant with mitigation**.

## 3.17 Transportation

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3.17.1 Regulatory Setting

#### ***Federal Laws, Regulations, and Policies***

There are no federal regulations pertaining to transportation impacts that are applicable to the Proposed Project.

#### ***State and Local Regulations***

In California, transportation analysis is informed by policies and standards established by the Caltrans. At the local level, this analysis is set by policies and standards established by the Alameda County Congestion Management Agency (CMA). Caltrans and local jurisdictions typically assess the impacts of long-term (not short-term) traffic conditions. In general, the goal of state and local plans and policies related to transportation is to prepare for future growth and the vehicular, transit, pedestrian, and bicycle travel demand associated with that growth.

The level of service (LOS)<sup>3</sup> designations for roadways in the Alameda County Congestion Management Program (CMP) network vary by roadway segments and are generally LOS E or LOS F. A LOS monitoring study prepared by the Alameda County CMA in 2018 indicates that, in the Project vicinity, I-680 operates at LOS E or better. The monitoring report indicates that SR-84 eastbound operates at LOS F or better. Specifically, SR-84 eastbound (from the off-ramp at I-680 to Vallecitos Lane) operates at LOS F during the PM peak period (Alameda County Transportation Commission 2018).

#### East County Area Plan

The *East County Area Plan* (Alameda County Community Development Agency Planning Department 1994) contains the following transportation goals and policies that are relevant to the Proposed Project:

**Goal:** To reduce East County traffic congestion.

**Policy 183:** The County shall seek to minimize traffic congestion levels throughout the East County street and highway system.

**Policy 184:** The County shall seek to minimize the total number of Average Daily Traffic (ADT) trips throughout East County.

#### City of Livermore General Plan

Because the Project's haul route to the Vasco Road Landfill involves travel through the City of Livermore, the following transportation policies in the City of Livermore's General Plan (2014) are relevant to the Proposed Project:

**Objective CIR-11.2:** Minimize adverse impacts to residents or businesses from rail and truck traffic.

**Policy P1:** No through truck traffic shall be allowed in residential areas.

## 3.17.2 Environmental Setting

### ***Regional and Local Roadways***

I-680 provides regional access to the Project area. I-680 is a four- to eight-lane freeway that extends between I-280 and U.S. Highway 101 in San Jose and I-80 in Fairfield. I-680 is a north-

---

<sup>3</sup> Level of service (LOS) is a qualitative description of a facility's performance based on average delay per vehicle, vehicle density, or volume-to-capacity ratio. Level of service ranges from LOS A, which indicates free-flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with very long delays.

south regional route, connecting the Livermore-Amador Valley with Contra Costa County in the north and the Santa Clara Valley in the south. In the Project vicinity, I-680 is accessed via SR-84.

SR-84 (Vallecitos Road) provides the primary access to the Project area. SR-84 is a two-lane state highway that extends east-west between SR 1 in San Gregorio to Menlo Park, across the Dumbarton Bridge through Fremont and Newark, and ends at I-580 in Livermore. In the Project vicinity, the highway has a relatively flat grade and straight alignment. The posted speed limit on SR-84 is 50 miles per hour (mph) in the Project vicinity.

Weekday traffic on I-680 consists primarily of commuter traffic during peak periods (generally between the hours of 7 a.m. and 9 a.m., and 4 p.m. and 6 p.m.), and a mix of traffic generated by residential, commercial and industrial uses throughout the day. Recent data published by Caltrans for 2018 indicate that the average daily traffic volume on I-680 in the Project vicinity is about 146,000 vehicles per day at the SR-84 interchange, with a.m. and p.m. peak-hour volumes of 11,600 vehicles per hour (Caltrans 2018a). Trucks represent about 7.6 percent of the total daily traffic volumes (Caltrans 2018b).

Weekday traffic on SR-84 also consists primarily of commuter traffic during peak periods. Based on recent data published by Caltrans for 2018, the average daily traffic volume on SR-84 near the I-680 interchange is 39,200 vehicles per day with a.m. and p.m. peak hour volumes of 4,400 vehicles per hour (Caltrans 2018a). Trucks represent about 1.6 percent of the total daily traffic volumes (Caltrans 2018b).

### ***Transit Service***

Alameda County Transit (AC Transit) is the main bus service provider in Alameda County. There is no AC Transit bus service along SR-84.

### ***Bicycle and Pedestrian Network***

Bikeways are typically classified as Class I, Class II, or Class III facilities. Class I bikeways are bike paths and Class II are bike lanes striped within paved areas of roadways that are established for bicycle use primarily. Class III bikeways are signed bike routes that allow bicycles to share streets or sidewalks with vehicles or pedestrians. Within the Project vicinity, the roadway segment from the I-680 northbound off-ramp at SR-84 extending to Vallecitos Lane is considered a bike route. There are bicycle lanes on both sides of Vallecitos Road; however, due to the speed of cars on this highway, it is not a popular bicycle route.

### 3.17.3 Discussion of Checklist Responses

**a. Conflict with Applicable Program, Plan, Ordinance or Policy Addressing the Circulation system, including Transit, Roadway, Bicycle and Pedestrian Facilities — Less than Significant**

As described in Chapter 2, *Project Description*, up to 26 workers at any given time would enter the Project site each weekday during the Project's 13-week construction period. Construction equipment and delivery trucks would access the site through the same area.

The primary source of traffic for the Proposed Project would be worker trips, trucks off-hauling excavated material from the Vallecitos Channel (including sediment, vegetation, and concrete), and trucks on-hauling rock. Although short-term, the 26 daily worker vehicle trips would add additional trips on SR-84 during the a.m. and p.m. peak hours, when construction workers would be traveling to and from the Project site. This small increase in vehicle trips could add to congestion on SR-84 and I-680 during a.m. and p.m. peak hours. However, because the LOS standards established by Alameda County apply to long-term traffic impacts resulting from a project and do not apply to temporary construction projects, the Project would not conflict with the Alameda County CMP.

An estimated 4,333 cubic yards (cy) of vegetation material and 5,127 cy of sediment would be excavated and removed from the site. As a worst-case estimate, this analysis assumes that excavated material that is not suitable for onsite reuse would be hauled to Vasco Road Landfill. Assuming that each truck has a capacity of 16 cy, approximately 687 round trips from the site to Vasco Road Landfill would be required during the Project's earthwork phase (approximately 40 days). This would result in an average of 17 round trips per day, or approximately 2 round trips each hour during the daily work period. The primary travel route for truck traffic between the Project area and Vasco Road Landfill would be from SR-84 north, followed by I-580 east, exiting at North Vasco Road in Livermore (see Figure 2-2 in Chapter 2, *Project Description*). This truck route would comply with the City of Livermore's General Plan Policy P1 under Objective CIR-11.2 in the Circulation Element: "No through truck traffic shall be allowed in residential areas." The addition of 2 vehicles per hour to these roadways would have a minimal effect on circulation patterns in the area.

Following the completion of project construction, ACWD employees and their contractors would conduct periodic maintenance activities at the project site approximately 10 times per year. These vehicle trips to and from the site would have a minimal effect on traffic circulation in the Project area.

Therefore, considering both short-term and long-term effects on motor vehicle and nonmotorized modes of transportation, the impact of the Proposed Project on traffic circulation and conflicts with policies related to traffic circulation would be **less than significant**.

***b. Conflict with or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) — Less than Significant***

According to the California Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact, absent substantial evidence indicating otherwise (OPR 2018).

Under existing conditions, maintenance activities at the Vallecitos Channel involves approximately two workers that conduct inspections approximately 10 times per year. Annual vehicle miles traveled (VMT) under existing conditions is approximately 200 miles.

During the Project's estimated 13-week construction phase, it is estimated that the Project's total annual VMT would be 38,940 miles. This would equate to a daily VMT of approximately 599 miles per day due to worker trips and haul trips for off-hauling sediment and vegetation. Compared to existing conditions, the Project would result in a one-time increase in annual VMT of 38,740 miles. While this increase in annual VMT is substantially bigger, project construction would be temporary. As described in Chapter 2, the maximum number of daily worker trips generated by the Project would be 26 trips per day, which is below OPR's threshold of 110 trips per day.

Once project construction is completed, it is estimated that the Project's total annual VMT would be 284 miles, compared to an annual VMT of approximately 200 miles under existing conditions. As such, operation and maintenance of the Project would result in an increase in 84 miles over baseline conditions due to additional maintenance vehicle trips, worker trips and haul trips for off-hauling excavated sediment and vegetation. While the same number of maintenance workers (2) would be needed for ongoing maintenance, the Project would result in two more vehicle trips per year (a total of 12 per year) or 0.0055 additional daily vehicle trips<sup>4</sup> beyond ACWD's current maintenance activities. Assuming 40 miles are traveled per worker trip, the increase in daily VMT (approximately 0.11 miles per day) would result in vehicle trips below OPR's threshold of 110 trips per day.

While construction of the Project would result in a temporary increase in daily vehicle trips, the Project would generate a small annual increase in operational trips per day (0.0055 trips per day) that would not exceed state criteria. As such, this impact would be **less than significant** and no mitigation is required.

***c. Substantially Increased Hazards Resulting from Geometric Design Features — Less than Significant with Mitigation***

Construction vehicles traveling to and from the Project area would share SR-84 with other vehicles as well as bicyclists and pedestrians. The use of SR-84 (Vallecitos Road) to access

---

<sup>4</sup> It is assumed that each worker represents a trip to and from the worksite (i.e., two vehicle trips).

Vallecitos Lane and the three private driveways leading to the Project site could temporarily increase traffic safety hazards due to potential conflicts between construction vehicles (which travel at slower speeds and wider turning radii than autos) and automobiles, bicyclists and pedestrians.

Off-haul truck trips used to transport excavated soil would occur Monday through Friday; thus the number of project construction-related vehicles on Saturdays would be less than those generated on weekdays. During the Project's earthwork construction phase, the greatest increase in the number of Project-related construction vehicles using SR-84 to access the Project area would occur on weekdays, when there would be an average of 2 truck trips per hour to and from the Project area (associated with off-hauling sediment and vegetation from the channel). During this same construction phase, the increase of up to 26 worker vehicle trips would also add additional trips on SR-84 during the a.m. and p.m. peak hours, when construction workers would be traveling to and from the Project site.

Since the majority of construction-related vehicle trips would occur on weekdays (when there are few pedestrians and bicyclists on Vallecitos Road), the potential for conflicts and increased traffic safety hazards with pedestrians and bicyclists would be limited. Regardless, haul trucks used during project construction would slow traffic down along SR-84 and could increase traffic safety hazards with oncoming vehicles traveling on SR-84. This is considered to be a potentially significant impact. However, implementation of **Mitigation Measure TRA-1** will require that a traffic control plan be prepared and implemented.

#### **Mitigation Measure TRA-1: Traffic Control Plan**

The ACWD or its contractor(s) will prepare and implement a traffic control plan in coordination with Caltrans and adjacent property owners where temporary construction access would occur (APNs: 96-365-7-1, 96-360-2, 96-360-1-8, and 96-365-2). Elements of the traffic control plan will include, but not be limited to, the following components:

- Advance warning signs will be installed on SR-84 (to the west and east of the access points) advising motorists and bicyclists of the construction zone ahead in order to minimize hazards associated with construction vehicles turning onto and exiting the access routes.
- Flaggers, illuminated signs, or flashing yellow lights, or a combination of these methods, may be used on SR-84 to warn motorists, bicyclists and pedestrians, about the construction zone.
- Bicycle access and circulation will be maintained during project construction where it is safe to do so.
- ACWD will notify nearby property owners of proposed construction activities.
- Adequate driving and bicycling conditions on Vallecitos Road will be maintained throughout the construction period.

Mitigation Measure TRA-1 requires development and implementation of a traffic control plan that requires ACWD to take actions to minimize traffic safety hazards during construction. Such actions may include installing signs to warn motorists, bicyclists and pedestrians of the construction zone; and use of flaggers, illuminated signs or flashing lights. Implementation of this measure would allow for traffic control to allow trucks to safely enter and exit the work site, if needed. As noted in Chapter 2, ACWD would also be required to obtain an encroachment permit from Caltrans. Therefore, with implementation of Mitigation Measures TRA-1 and by complying with the Project's encroachment permit conditions, impacts on roadway or intersection safety as a result of the Proposed Project would be **less than significant with mitigation**.

***d. Result in Inadequate Emergency Access — Less than Significant with Mitigation***

There would be a minimal, temporary increase in local traffic due to the Proposed Project during construction, primarily resulting from trucks off-hauling excavated material from the Project site and delivery of rock and other construction materials. Project construction would not require full road closures of SR-84, and emergency vehicles would have access to SR-84 and all public roadways. In some instances, traffic flow on SR-84 could be temporarily interrupted for short periods of time to accommodate large vehicles turning onto SR-84 or off of SR-84 to one of the Project's temporary access roads; however, implementation of **Mitigation Measure TRA-1** would ensure that motorists, pedestrians, and bicyclists have sufficient notice about project construction activities nearby through signage, flaggers, and/or flashing lights. Additionally, Proposed Project treatments include surface repairs to access roads, thus improving access conditions to the Project area and surrounding land in the long-term. As such, with implementation of **Mitigation Measure TRA-1**, impacts on emergency access would be **less than significant with mitigation**.

*This page intentionally left blank*

### 3.18 Tribal Cultural Resources

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.18.1 Regulatory Setting

##### ***Federal Laws, Regulations, and Policies***

There are no federal laws, regulations, or policies regarding tribal cultural resources that are applicable to the Proposed Project.

##### ***State Laws, Regulations and Policies***

Assembly Bill (AB) 52 requires, per Pub. Res. Code 21080.3.1, that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe, and if the agency intends to release a negative declaration, mitigated negative declaration, or environmental impact report for a project. The bill also specifies, under Pub. Res. Code 21084.2, that a project with an effect

that may cause a substantial adverse change in the significance of a TCR is considered a project that may have a significant effect on the environment.

As defined in Section 21074(a) of the Pub. Res. Code, TCRs are:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - a. Included or determined to be eligible for inclusion in the CRHR; or
  - b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074(b) and (c) as follows:

- (b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
- (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to the newly chaptered Pub. Res. Code Section 21080.3.2, or according to Pub. Res. Code Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

### 3.18.2 Environmental Setting

Prior to the arrival of the Spanish explorers in northern California in the late 1700s, the Vallecitos Valley was occupied by Native California peoples who spoke the Chochenyo dialect of the San Francisco Bay Costanoan language. The tribelet who occupied the project area was the Causen Ohlone (Milliken et al. 2009). Members of the Causen were first taken to Mission Santa Clara and, later, to Mission San Jose in present-day Fremont. After the secularization of the missions, many of the Ohlone became employed by the owners of the ranchos that were granted and established Native American communities in otherwise unpopulated areas, such as the Livermore Valley. One such community was the Alisal Rancheria south of Pleasanton and near the Project area. Alisal

was established on land provided to the community by the Bernal family, who owned the Rancho el Valle de San Jose. The community, which included Yokuts and Miwok members, as well as Ohlone, continued into the early twentieth century, even as the surrounding lands originally within Rancho el Valle de San Jose changed hands. Unfortunately, the economic base of Alisal could not support the community and it began to falter; as a result, families began to leave for established towns in the area. Also during this time, the population of the Livermore Valley began to grow, such that Alisal became surrounded by Anglo-American establishments. Perhaps the final demise of Alisal was the loss of the claim to the land in a “paper shuffle” in Washington, D.C. (Leventhal et al. 1994:309-310). The Muwekma Ohlone tribe of today comprises the descendants of the Alisal community.

### 3.18.3 Discussion of Checklist Responses

***a. Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resources Listed or Eligible for Listing in the California Register of Historical Resources or a Local Register of Historical Resources — No Impact***

None of the Native American tribes in the Project area have submitted letters of interest to the ACWD pursuant to Pub. Res. Code Section 21080.3.1(b)(1). However, in the spirit of compliance with Pub. Res. Code Section 21080.3.1, the ACWD requested a list of tribes with a traditional and cultural affiliation with the Project area from the NAHC on November 5, 2020. The NAHC replied on November 16, 2020 with a list of ten tribal contacts. The ACWD notified local tribes identified by the NAHC about the Proposed Project via the U.S. Postal Service with a returned certified receipt on December 17, 2020. The Native Americans contacted by the ACWD are listed in **Table 3-11**. Furthermore, the NAHC did not report the presence of any resources listed in the Sacred Lands File for the Project Area.

**Table 3-11. Native American Consultation**

Organization/Tribe	Name of Contact	Letter Date	Comments (as of January 26, 2021)
Ms. Charlene Nijmeh, Chairperson	Muwekma Ohlone Indian Tribe of the SF Bay Area	December 17, 2020	No response to date.
Ms. Monica Arellano	Muwekma Ohlone Indian Tribe of the SF Bay Area	December 17, 2020	No response to date.
Mr. Tony Cerda, Chairperson	Costanoan Rumsen Carmel Tribe	December 17, 2020	No response to date.
Mr. Andrew Galvin	Ohlone Indian Tribe	December 17, 2020	No response to date.
Ms. Corrina Gould, Chairperson	The Confederated Villages of Lisjan	December 17, 2020	Chairperson requested an electronic copy of the notification letter on January 21, 2021. It was sent to her the following day.

Organization/Tribe	Name of Contact	Letter Date	Comments (as of January 26, 2021)
Ms. Katherine Erolinda Perez, Chairperson	North Valley Yokuts Tribe	December 17, 2020	No response to date.
Mr. Timothy Perez	North Valley Yokuts Tribe	December 17, 2020	No response to date.
Ms. Ann Marie Sayers, Chairperson	Indian Canyon Mutsun Band of Costanoan	December 17, 2020	No response to date.
Ms. Kanyon Sayers-Roods, MLD Contact	Indian Canyon Mutsun Band of Costanoan	December 17, 2020	No response to date.
Ms. Irene Zwierlein, Chairperson	Amah Mutsun Tribal Band	December 17, 2020	No response to date.

The ACWD did not receive requests for formal consultation under Pub. Res. Code Section 21080.3.1(b)(2) from any of those individuals contacted. No TCRs that are listed or eligible for listing in the CRHR or a local register of historical resources have been identified within the Project area. Therefore, there would be **no impact**.

***b. Cause a Substantial Adverse Change to Tribal Cultural Resources Determined by the Lead Agency to be Significant — Less than Significant with Mitigation***

As mentioned above, although the ACWD notified tribes with a traditional and cultural affiliation with the area about the Proposed Project, none of the tribes contacted identified TCRs in the Project area. Furthermore, no TCRs determined by the lead agency, in its discretion and supported by substantial evidence, to be significant are known to be located in the project vicinity. As a result, it appears that there would be no impact on TCRs. However, it is possible that Native American archaeological remains or Native American human remains that could be TCRs could be discovered during the course of construction. If such resources are identified, they would be treated according to **Mitigation Measure CR-1** or **Mitigation Measure CR-2**, respectively, as described in Section 3.5, "Cultural Resources." Implementation of these mitigation measures would result in a less-than-significant impact with regard to TCRs. As a result, this impact would be **less than significant with mitigation**.

### 3.19 Utilities and Service Systems

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.19.1 Regulatory Setting

##### ***Federal Laws, Regulations, and Policies***

No federal laws, regulations, or policies are applicable to utilities and service systems in relation to the Proposed Project.

##### ***State Laws, Regulations, and Policies***

###### California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Pub. Res. Code, Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes

by at least 50 percent by 2000 (Pub. Res. Code Section 41780). A jurisdiction's diversion rate is calculated as the percentage of its total waste that is diverted from land disposal through reduction, reuse, and recycling programs.

The State, acting through the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery [CalRecycle]) determines compliance with this mandate based on jurisdiction's per-capita disposal rates.

In 2019, the per-capita targeted disposal rate was 4.9 pounds per person per day and the industry employment-based target was 19.8 pounds per person per day. According to the CalRecycle database for per capita disposal rates, in 2019, the calculated population disposal rate was 2.4 pounds per person per day and calculated disposal rate for employees was 13.8 pounds per person per day for unincorporated Alameda County (CalRecycle 2020a).

#### California Code of Regulations, Title 8, Section 1541: Excavations

Title 8, Section 1541 of the California Code of Regulations requires excavators to determine the approximate locations of subsurface installations, such as sewer, telephone, fuel, electric, and water lines, before opening an excavation.

According to California law (Government Code Section 4216 et seq.), owners and operators of underground utilities are required to become members of and participate in the regional notification center such as Underground Service Alert-Northern California (USA North 811). USA North 811 receives reports of planned excavation activities from public and private excavators and transmits the information to all participating members that may have underground facilities at the location of an excavation site. USA members mark or stake their facilities, provide information, or give clearance to dig (USA North 811 2020).

### ***Local Laws, Regulations, and Policies***

#### East County Area Plan

The *East County Area Plan* guides land use and development in unincorporated Alameda County. Goals and policies related to utilities and service systems and that are applicable to the Proposed Project include the following (Alameda County Community Development Agency Planning Department 1994):

#### ***Storm Drainage and Flood Control***

**Goal:** To provide efficient, cost-effective, and environmentally sound storm drainage and flood control facilities.

**Policy 278:** The County shall promote flood control measure that advance the goals of recreation, resource conservation (including water quality and soil conservation), groundwater recharge, preservation of natural riparian vegetation and habitat, and the preservation of scenic values of the County's arroyos and creeks.

**Policy 281:** The County shall support and encourage the design of future flood control projects in a manner that preserves and/or restores and enhances riparian vegetation.

**Policy 282:** The County shall encourage use of natural or nonstructural storm water drainage systems to preserve and enhance the natural features of a site.

### *Water Quality*

**Goal:** To protect and enhance surface and groundwater quality.

**Policy 306:** The County shall protect surface and groundwater resources by:

- preserving areas with prime percolation capabilities and minimizing placement of potential sources of pollution in such areas;
- minimizing sedimentation and erosion through control of grading, quarrying, cutting of trees, removal of vegetation, placement of roads and bridges, use of off-road vehicles, and animal-related disturbance of the soil; and,
- not allowing the development of septic systems, automobile dismantlers, waste disposal facilities, industries utilizing toxic chemicals, and other potentially polluting substances in Creekside, reservoir, or high groundwater table areas when polluting substances could come in contact with flood waters, permanently or seasonally high groundwaters, flowing stream or creek waters, or reservoir waters.

### Alameda County Integrated Waste Management Plan

The Alameda County Waste Management Plan includes countywide waste diversion and landfill disposal plans and programs, developed by the Alameda County Waste Management Authority.

## **3.19.2 Environmental Setting**

The Proposed Project is located entirely within an unincorporated area of Alameda County. Utilities and service systems in the Project area including water supply, stormwater drainage, solid waste, electricity, and natural gas are discussed below.

### ***Water Supply and Storm Drainage***

The Vallecitos Channel is a critical component in the ACWD's water supply system. Downstream of the Vallecitos Channel confluence with Vallecitos Creek, water flows downstream into Arroyo de la Laguna, Alameda Creek, and then Niles Canyon where some flows are impounded and diverted in the City of Fremont to recharge the Niles Cone Groundwater Basin. The Vallecitos Channel plays a key role in this overall water delivery system that provides potable water for ACWD's customers. In addition to conveying SBA water to the ACWD for water supply purposes, the Vallecitos Channel serves as an "emergency release" discharge location for DWR in its

operation of the SBA. The Vallecitos Channel also captures overland stormwater flow from surrounding lands in Vallecitos Valley.

Within the Project area, a 14-inch water pipeline traverses the channel and access road near Station 87+00.

### ***Solid Waste***

Solid waste generated by the Proposed Project on site would be taken to landfills and disposal facilities in Alameda County that accept construction and demolition waste. The two landfills closest to the Project area are the Vasco Road Sanitary Landfill or the Altamont Landfill. The Vasco Road Landfill is approximately 12.0 miles northeast of the Project area and accepts construction and demolition debris, mixed municipal, industrial, contaminated soils, and organic material. The Vasco Road Landfill has an estimated remaining capacity of 7,379,000 cy (22 percent of total permitted capacity) as of 2016, and is anticipated to close December 2022 (CalRecycle 2020b). The Altamont Landfill is approximately 15.0 miles northeast of the Project area and accepts construction/demolition debris, municipal and industrial waste, and organic material. The Altamont Landfill has an estimated remaining capacity of 65,400,000 cy (approximately 53 percent of total permitted capacity) as of 2016 (CalRecycle 2020c).

### ***Electricity***

PG&E and San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy Water and Power (HHWP) provide electrical power to the Sunol Valley. PG&E and SFPUC own overhead powerlines that transect the Project area at the following locations:

- A PG&E 230-kilovolt (kV) power line transects the Project area between stations 73+00 and 80+00. Several transmission towers are located along the Vallecitos Channel floodplain.
- A PG&E 115-kV power line transects the Project area between stations 60+00 and 65+00. Transmission towers are located outside the Project area.
- A HHWP 115-kV power line is located south of and parallels the Vallecitos Channel; however, the power line is located outside of the Project area.

### ***Natural Gas***

PG&E owns a network of natural gas transmission pipelines that transect the Project area. Natural gas pipelines that are within the project include the following:

- Line 131 – A 24-inch natural gas pipeline located adjacent to the District's access road or Project Entrance Point #1 and transects the road at the hairpin turn as indicated on the 65% design plans (Appendix A). This pipeline is oriented in an east-west direction.

- Line 107 – A 22-inch natural gas pipeline that transverses the Vallecitos Channel near Station 86.5+00. This pipeline is oriented north-south.
- Line 303 – A 36-inch diameter natural gas pipeline that transverses the Vallecitos Channel near Station 87.5+00. This pipeline is oriented north-south.

### 3.19.3 Discussion of Checklist Responses

***a-c. Require the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications Facilities; Result in Insufficient Water Supplies; or Result in Inadequate Wastewater Treatment Capacity — No Impact***

The Proposed Project is limited to sediment and vegetation management, bank stabilization, access road improvements, and riparian/wetland enhancement activities within and along the Vallecitos Channel. These activities would not require new municipal water or wastewater service to be established on site. During construction, workers would use portable sanitary restrooms, which would be provided and serviced by a third-party supplier. No other wastewater would be generated that requires treatment and disposal at a municipal wastewater treatment plant.

Project construction and maintenance activities would temporarily use water for dust control and vehicle washing. This water would be supplied by water trucks provided by ACWD's contractor.

No proposed treatment activities would occur near the three known underground PG&E natural gas pipelines or overhead powerlines described above in "Environmental Setting"; therefore, relocation of electric power or natural gas lines is not anticipated to occur. Further, implementation of BMP-9 (Investigation of Utility Line Locations), which requires an evaluation of utility line locations that could be affected by project construction activities, would ensure that an evaluation of utility lines is conducted prior to construction and that appropriate encroachment permits and protocols are followed to minimize utility disruption.

Based on the discussion above and with implementation of BMP-9, impacts on water, **no impact** regarding wastewater treatment, gas, and electrical utility lines would occur.

***d. Generate Solid Waste in Excess of State or Local Standards — Less than Significant***

As described in Table 2-3 in Chapter 2, *Project Description*, project construction activities would involve sediment and vegetation removal that would require off-hauling and disposal of up to 4,333 cy of vegetative material, 5,129 cy of sediment, and 10 cy of concrete debris.

As described in “Environmental Setting” above, the Vasco Road Landfill or the Altamont Landfill are the closest landfills to the Project area, and as described in Chapter 2, vegetative debris, sediment and concrete would likely be disposed of at the Vasco Road Landfill

As of 2016, the Vasco Road Sanitary Landfill, located at 4001 North Vasco Road in Livermore (approximately 22 miles away by road), had approximately 7.4 million cy of remaining capacity (CalRecycle 2020b). The Project would contribute a total of 9,472 cy (approximately 0.13 percent) of the Vasco Road Landfill’s remaining capacity. In the event that the Vasco Road Landfill cannot be used, the Altamont Landfill & Resource Recovery facility also would have available capacity (CalRecycle 2020c). The anticipated landfill diversion rates for the Proposed Project would be in accordance with the California Integrated Waste Management Act requirements for jurisdictions.

As such, the Proposed Project would not generate solid waste in excess of State or local standards or in excess of the remaining capacity available at the Vasco Road Landfill or Altamont Landfill. Therefore, this impact would be **less than significant**.

***e. Failure to Comply with Solid Waste Regulations — Less than Significant***

As described in Chapter 2, *Project Description*, the Proposed Project would reuse graded soil to the extent feasible; however, reuse of all material may not be possible, requiring disposal at a landfill. Given the relatively small volume of solid waste that would be generated the Proposed Project (approximately 4,333 cy of vegetative material, 5,129 cy of sediment, and 10 cy of concrete debris), the Project would not materially affect Alameda County’s ability to comply with CalRecycle’s solid waste regulations. Therefore, this impact would be **less than significant**.

## 3.20 Wildfire

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than- Significant Impact</i>	<i>No Impact</i>
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.20.1 Regulatory Setting

There are no federal laws, regulations, or policies in relation to wildlife that are applicable to the Proposed Project.

#### ***State Laws, Regulations, and Policies***

##### CAL FIRE Wildland Fire Management

The Office of the State Fire Marshal and the CAL FIRE administers state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Pub. Res. Code Section 4442).

- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Pub. Res. Code Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire-suppression equipment (Pub. Res. Code Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet of any flammable materials (Pub. Res. Code Section 4431).

### ***Local Laws, Regulations, and Policies***

#### East County Area Plan

Goals and policies in the *East County Area Plan* related to wildfire and that are applicable to the Proposed Project include the following (Alameda County Community Development Agency Planning Department 1994):

#### *Fire Hazards*

**Goal:** To minimize the risks to lives and property due to fire hazards.

**Policy 324:** The County shall require the use of fire resistant building materials, fire-resistant landscaping, and adequate clearance around structures in “high” and “very high” fire hazards areas.

## **3.20.2 Environmental Setting**

The Proposed Project is located in Vallecitos Valley east of the community of Sunol. The Project area is situated in a generally flat, open grassland area with sloping hills to the south. Vegetation within the Project area is largely mixed grassland used for cattle grazing and undeveloped easements beneath utility powerlines. Dense emergent vegetation is present along portions of the Vallecitos Channel. Other land uses surrounding the Project area include private residences, a horse stable and training facility, and a recreational paint-ball facility.

### ***Wildfire Hazard Areas***

CAL FIRE maps areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (CAL FIRE 2007a). The areas are referred to as Fire Hazard Severity Zones (FHSZ). State Responsibility Areas (SRAs) are defined based on cover, beneficial water uses, probable erosion damage, and fire risks and hazards (Pub. Res. Code Section 4125), and CAL FIRE has a legal responsibility to provide fire protection on all SRA lands. Local Responsibility Areas (LRAs) are also identified by CAL FIRE but managed at the local level, and are classified as Very High Fire Severity Zones (VHFSZ).

The Project area is designated as Moderate FHSZ within the SRA, and is therefore under the responsibility of CAL FIRE for fire emergencies (CAL FIRE 2007b). The Project area is located

approximately one mile northwest from the nearest Very High FHSZ in the SRA, which is located in the Pleasanton Ridge Regional Park. Additionally, the Project and surrounding area are designated as Non-VHFHSZ within the LRA (CAL FIRE 2008).

### 3.20.3 Discussion of Checklist Responses

#### ***a. Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan — Less than Significant with Mitigation***

The Project is located near SR-84, a primary alternative route to I-680 and I-580, that experiences high traffic conditions. Project construction -related vehicle trips would temporarily increase traffic and could result in traffic slowdowns on SR-84 during the 13-week duration of the Proposed Project. Thus, construction could result in delays contributing to temporary impairment of an evacuation process, should the Project's activities coincide with an emergency. No full-road closures are expected along SR-84; however, temporary single-lane use may be required.

As described in Section 3.17, "Transportation," implementation of **Mitigation Measure TRA-1** would ensure that a traffic control plan is developed in coordination with Caltrans. Mitigation Measure TRA-1 provides safety measures to minimize potential impacts on local traffic patterns and maintain adequate traffic flow and emergency access prior during project construction activities. Implementation of this mitigation measure would minimize the potential for the Proposed Project to interfere with an adopted emergency response plan or emergency evacuation plan.

Additionally, Proposed Project treatments include surface repairs to access roads, thus improving access conditions to the Project area and help local emergency response personnel comply with adopted emergency response plans or evacuation plans. Therefore, this impact would be **less than significant with mitigation**.

#### ***b. Exacerbate Wildfire Risk (due to Slope, Prevailing Winds, or Other Factors) and Thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire — Less than Significant***

Project construction activities and associated maintenance activities would not involve placement of people or habitable structures in areas without adequate fire protection. Additionally, proposed treatment types and associated maintenance activities would not result in the creation of new wildland areas which could increase fire dangers.

Because certain Proposed Project activities (e.g., earthwork activities) would be conducted during the dry summer and fall months when fire danger is the highest, there is a potential for an accidental ignition of a wildland fire during construction activities. Use of vehicles and equipment for construction activities could ignite a fire through generation of sparks or heat. ACWD would implement BMP-12 (Fire Prevention) to reduce potential impacts, which requires on-site fire suppression equipment, spark arrestors on all equipment with internal combustion

engines, and restricts activities on high fire danger days. With implementation of this BMP would, the Proposed Project would minimize risk of igniting wildfire during project construction activities and would not substantially exacerbate fire risk to nearby structures or occupants. This impact would be **less than significant**.

***c. Require the Installation or Maintenance of Associated Infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that May Exacerbate Fire Risk — Less than Significant***

No installation or maintenance of infrastructure would be required for the Proposed Project that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. As discussed above, operation and maintenance of the Proposed Project would involve ongoing maintenance activities by the ACWD including vegetation management and minor surface repairs to the ACWD's existing access road. This impact would be **less than significant**.

***d. Expose People or Structures to Significant Risks, including Flooding or Landslides, as a Result of Runoff, Post-fire Slope Instability, or Drainage Changes? — Less than Significant***

Proposed Project activities would not involve placement of people or habitable structures in areas with risks related to post-wildfire flooding or landslides. Moderate to high severity wildfire can greatly increase the likelihood of debris sliding and debris flows (Haas et al. 2017). Rainstorms after wildfire can result in flash floods and debris flows, which can impact people or structures that are located below an area that has burned. As described in Section 3.7, "Geology, Soils, and Seismicity," Proposed Project construction activities, including vegetation removal, minor bank grading, and stabilization measures, would have the potential to contribute to erosion during the construction period and in the near term following construction. Implementation of BMP-2 (Area of Disturbance), BMP-3 (Erosion and Sediment Control), and BMP-8 (Fill, Spoils, and Stockpiled Materials) would minimize the potential for landslides by minimizing the area of ground disturbance and implementing erosion control measures to stabilize soils. With implementation of these BMPs, the Proposed Project would minimize the potential risks related to post-fire landslides or flooding.

Implementation of Proposed Project treatments (e.g., vegetation and sediment management, partial and full RSP treatments, upland road drainage improvements) would reduce flood risk, contain and convey emergency discharge events, and restore access to the ACWD's access road. Proposed project activities would thus reduce the potential of significant post-fire risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. This would be a beneficial impact compared to existing conditions. Therefore, impacts would be **less than significant**.

### 3.21 Mandatory Findings of Significance

<i>Significance Criteria</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less-than-Significant Impact</i>	<i>No Impact</i>
a. Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the Project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.21.1 Discussion of Checklist Responses

**a. *Effects on environmental quality, fish or wildlife, and historic resources—Less than Significant with Mitigation***

Wildlife Habitat and Populations; Rare and Endangered Species

The Proposed Project would not substantially reduce the number or restrict the range of a rare or endangered plant or animal species. Special-status wildlife species that could be affected by the Proposed Project are Alameda whipsnake, California red-legged frog, California tiger salamander, western pond turtle, tricolored blackbird, burrowing owl, grasshopper sparrow, white-tailed kite, loggerhead shrike, and American badger. The Proposed Project would result in temporary impacts to habitat supporting California red-legged frog, California tiger salamander,

and Alameda whipsnake. Implementation of BMPs identified in Table 2-5 of Chapter 2 would help avoid and minimize potential impacts to special-status wildlife species. As described in Section 3.4, “Biological Resources,” the Project is expected to obtain incidental take coverage for federally listed species by being appended to the PBO of the EACCS. Thus, the Project would be required to comply with AMMs in the EACCS and the GMMs of the PBO and implementation of **Mitigation Measure BIO-1** would ensure that applicable AMMs and GMMs from the EACCS and PBO are adhered to. While the proposed in-channel wetland benches would provide 0.61 acre of compensatory mitigation for California red-legged frog habitat, additional mitigation would be needed to offset the Project’s effects on California red-legged frog habitat and dispersal habitat for California tiger salamander. Implementation of **Mitigation Measure BIO-2** would require that a qualified biologist conduct pre-construction surveys and construction monitoring for special-status wildlife species and nesting birds, and **Mitigation Measure BIO-3** would provide compensatory mitigation for impacts to habitat supporting California tiger salamander, California red-legged frog and Alameda whipsnake. Additionally, implementation of **Mitigation Measure BIO-4** would require preconstruction nesting bird surveys and **Mitigation Measure BIO-5** would require pre-construction surveys for burrowing owl prior to initiating ground-disturbing activities.

In the long term, the Proposed Project is expected to result in beneficial effects to wetland habitat in Vallecitos Channel and the surrounding floodplain by improving water quality, managing sediment deposition, and increasing habitat complexity. Incorporating willow stakes at the proposed bank stabilization sites would increase riparian habitat and establishing the in-channel riparian/wetland benches would result in ecological lift along the channel by converting approximately 0.61 acre of upland habitat to wetland that may benefit California red-legged frog and tricolored blackbird. In addition, as the Project would improve water quality and help maintain ACWD’s water supply reliability, the Project is expected to benefit salmonid habitat in Alameda Creek particularly during critically dry or drought years when SBA releases to the Vallecitos Channel is the only source of water in Alameda Creek. In conclusion, establishing the onsite riparian/wetland benches and riparian plantings in combination with implementing AMMs, GMMs, BMPs and Mitigation Measures BIO-1 through BIO-3 would ensure that the Proposed Project does not degrade the environmental quality for wildlife or cause populations of fish and wildlife to drop below sustaining levels. This impact would be less than significant with mitigation.

#### California History and Prehistory

Proposed Project activities could affect unknown cultural resources in the Project area; however, implementation of **Mitigation Measures CR-1** and **CR-2** would reduce this impact to a **less-than-significant** level.

#### ***b. Cumulative impacts—Less than Significant with Mitigation***

A cumulative impact refers to the combined effect of “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). As defined by the State of California, cumulative impacts reflect “the change in the environment which results from the incremental

impact of the Proposed Project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (CEQA Guidelines Section 15355[b]).

The Proposed Project’s primary effects on the environment are related to biological resources and transportation/traffic. Long-term effects on other resource topics considered in this document (e.g., air quality, GHG, noise) would be reduced to a less-than-significant level after mitigation and would not overlap with cumulative projects in a way that could result in a considerable contribution to a significant cumulative impact.

Based on review of Caltrans’ website (Caltrans 2020), SFPUC’s website (SFPUC 2019 and 2020), and the State Office of Planning and Research’s CEQAnet web portal, planned projects in the general area that may combine with the Proposed Project to produce a cumulative impact include the following:

- 84 Expressway Widening and SR-84/I-680 Interchange Improvements Project involves widening and conforming SR-84 to expressway standards between south of Ruby Hill Drive and I-680 interchange. This project would also improve the SR-84/I-680 interchange ramps and extend the existing southbound I-680 High Occupancy Vehicle/express lane northward by approximately 2 miles. This project is intended to alleviate existing and projected traffic congestion on SR-84 as a regional connector between I-680 and I-580, improve circulation between SR-84 and I-680 at the SR-84/I-680 interchange, and improve safety for motorists and cyclists on this segment of SR-84. Primary improvements include widening SR-84 to a 4-lane expressway, a new signalized intersection at Little Valley Road/Vallecitos Atomic Laboratory Road, a Class II bikeway provided each direction of SR-84, construction of a 1,000-foot auxiliary lane on southbound I-680 to the south of Calaveras Road/Paloma Way and re-align the on-ramp from Paloma Way to southbound I-680, reconstruct the off-ramp from northbound I-680 and construct a new flyover ramp from Calaveras Road to northbound I-680 and construct a new slip on-ramp from Calaveras Road to northbound SR-84, among other road and bikeway improvements. This project is currently in the design phase and construction will occur between Spring 2021 and Spring 2024 (Caltrans 2020). Early tree removal work began in mid-November 2020 and is estimated to be completed by February 2021.
- The SFPUC’s Alameda Creek Recapture Project would recapture water that the SFPUC is required to release or bypass upstream in Alameda Creek as part of operation of the SFPUC’s new Calaveras Dam. Under this project, the SFPUC would construct pumping and associated facilities to withdraw water from Pit F2, an existing quarry pit located south of the I-680/SR-84 junction and west of Calaveras Road. No construction activities would occur within Alameda Creek stream channel. Once built, SFPUC would pump water from Pit F2 that passively percolates or seeps into F2 from Alameda Creek streamflow and convey water pumped from F2 to existing SFPUC facilities for treatment and distribution to its customers in the Bay Area. Construction activities would occur in

and around Pit F2 on SFPUC-owned property and involve construction of the following components: turbine pumps mounted on barges, discharge pipelines extending from each turbine pump, a new pipeline connection between the pipe manifold and existing Sunol Pump Station Pipeline, throttling valves, an electrical control building and electrical transformer and overhead power lines. Project construction is expected to occur between 2020 and 2022 (SFPUC 2019).

- The SFPUC's Alameda Creek Watershed Center is currently under construction in Sunol. The center will be located next to the Sunol Water Temple on Paloma Way and is intended to raise awareness of the natural and cultural history of the Alameda Creek Watershed and the Hetch Hetchy Regional Water System. The center will have indoor and outdoor features including an exhibit hall with an aquarium, watershed discovery lab to host school programs, a community room, a trail, history alcoves, and picnic area. Construction of this facility is currently underway and is scheduled for completion in March 2022 (SFPUC 2020).

The projects listed above involve water infrastructure and transportation infrastructure projects. These projects are located in the same geographic area as the Proposed Project and may affect similar types of resources (e.g., biological resources, transportation/traffic). All of these projects would be required to comply with the same regional air quality and GHG regulations as would the Proposed Project, and each would be required to reduce or mitigate significant impacts in those areas. Of these projects, the Caltrans 84 Expressway Widening and SR-84/I-680 Interchange Improvements Project would have overlapping construction schedules with the Proposed Project and involve construction activities along SR-84. Both the Proposed Project and the SR-84 Expressway Widening and SR-84/I-680 Interchange Improvements Project would collectively increase traffic safety hazards along this highway. The Caltrans project could also affect access to the Proposed Project site. As discussed in Section 3.17, "Transportation," the Project's impact associated with increased traffic and safety hazards would be reduced to less than significant with implementation of **Mitigation Measure TRA-1 (Traffic Control Plan)**, which includes provisions to address potential safety hazards during construction activities for the Proposed Project. However, even with implementation of this mitigation measure, the Proposed Project's contribution to cumulative traffic safety hazards would remain cumulatively considerable. Implementation of **Mitigation Measure CUM-1 (Combined SR-84 Traffic Control Plan)** would require ACWD to coordinate the Proposed Project's traffic control plan with Caltrans staff managing the SR-84 Expressway Widening and SR-84/I-680 Interchange Improvements Project to minimize cumulative traffic safety impacts, thereby reducing the Proposed Project's contribution to this cumulative impact (**less than significant with mitigation**).

#### **Mitigation Measure CUM-1: Coordinate with SR-84 Project Team**

Prior to construction, ACWD or its contractor will coordinate the Proposed Project's traffic control plan with Caltrans staff managing the SR-84 Expressway Widening and SR-84/I-680 Interchange Improvements Project. As part of this coordination effort, ACWD or its contractor and Caltrans staff will review the traffic control plans and construction

activity timelines for both the Proposed Project and the SR-84 Expressway Widening and SR-84/I-680 Interchange Improvements Project to determine where there may be construction activity overlap and, if determined appropriate, whether there is an opportunity to shift project activities associated with either project to minimize traffic safety hazards on SR-84.

The overall contribution of the Proposed Project to fish, wildlife, and water quality would be less than significant with mitigation. Therefore, the Proposed Project's contribution to impacts on these resources would not be cumulatively considerable (**less than significant with mitigation**).

***c. Have a substantial adverse effect on human beings, either directly or indirectly—Less than Significant with Mitigation***

All of the potentially adverse effects on human beings identified in this initial study would be avoided or reduced by BMPs incorporated into the Proposed Project or would be mitigated to a less-than-significant level by implementation of measures identified in this document. Specifically, impacts related to air pollutant emissions and particularly NO<sub>x</sub> emissions would be significant; however, implementation of implementation of BMP-6 (Dust Management Controls and Air Quality Protection) and Mitigation Measure AQ-1 would reduce the impact of criteria pollutant emissions to a less-than-significant level. Construction noise impacts would be reduced to a **less-than-significant** level through implementation of Mitigation Measure NOI-1. Temporary traffic safety hazards on SR-84 would be reduced through implementation of **Mitigation Measure TRA-1**. Collectively, with these mitigation measures, no substantial adverse effects on human beings would result and the impact would be **less than significant with mitigation**.

*This page intentionally left blank*

## Chapter 4

# ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this Vallecitos Channel Maintenance Project, as indicated by the checklist on the preceding pages.

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

*This page intentionally left blank*

## Chapter 5 DETERMINATION

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the sources of information listed in the file, and the comments received, conversations with knowledgeable individuals; the preparer's personal knowledge of the area; and, where necessary, a visit to the site. For further information, see the environmental background information contained in the permanent file on the Vallecitos Channel Maintenance Project (Proposed Project).

On the basis of this initial evaluation:

- ☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Proposed Project have been made by or agreed to by the Proposed Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the Proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

  
Signature

3/17/2021

Date

Name: Ed Stevenson

*This page intentionally left blank*

## Chapter 6

### REPORT PREPARATION

#### Alameda County Water District

43885 S. Grimmer Boulevard  
Fremont, CA 94538  
(925) 454-5000

Kerri Smyth, PE	Project Engineer
Benjamin Egger	Project Engineering Supervisor

#### Horizon Water and Environment

266 Grand Avenue, Suite 210  
Oakland, CA 94610  
(510) 986-1850

Ken Schwarz, Ph.D.	Principal-in-Charge
Allison Chan	Project Manager
Brian Piontek	Deputy Project Manager
Eric Christensen	Senior Associate
Jennifer Schulte	Senior Air Quality Specialist
Debra Lilly	Senior Associate
Janis Offermann	Senior Archaeologist
Ryan Johnson	Analyst

## **Waterways Consulting, Inc.**

509A Swift Street  
Santa Cruz, CA 94060  
(831) 421-9291

Matt Weld

Principal Engineer

Brent Zacharia, MS, PE

Senior Engineer

## **H.T. Harvey and Associates**

983 University Avenue  
Los Gatos, CA 95032  
(408) 458-3200

Steve Rottenborn

Principal Ecologist

Max Busnardo

Principal Restoration Ecologist