

**Pezzi Road Bridge Replacement  
over Calaveras River**

**Draft *IS/MND***



**Draft Initial Study with Proposed Mitigated  
Negative Declaration**

San Joaquin County  
District 10-SJ  
Bridge No. 29C0199  
BRLO-5929(240)

**Prepared for:**



San Joaquin County  
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Stockton, CA 95205

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**October 2021**

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to San Joaquin County, Attn: Michael Chung, PE, Project Manager, San Joaquin County, 1810 East Hazelton Avenue, CA. Phone No. (209) 468-8337

# Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

## ***PROJECT DESCRIPTION***

San Joaquin County (County), in coordination with the California Department of Transportation (Caltrans), proposes to replace the Pezzi Road Bridge (Number 29C0199) and improve the approach roadway to the bridge. The bridge is located within an agricultural area in San Joaquin County, approximately 3 miles east of State Route (SR) 99 and north of the town of Waterloo.

The existing Pezzi Road Bridge is on a two-lane rural road across the Calaveras River. It was originally constructed in 1926 and consists of a three-span reinforced concrete T-Beam approximately 63.5 feet long. The deck clear width is approximately 18 feet and is striped for two 9-foot lanes. The bridge is supported by two column piers and diaphragm abutment walls, all of which are founded on shallow spread footings. The Caltrans Structure Inventory and Appraisal Report classifies the bridge as Functionally Obsolete. The most recent County traffic count in March 2018 determined the average daily traffic (ADT) at approximately 420.

Typical equipment for roadway construction would include heavy construction earthmoving equipment, dump trucks and pavers. Typical bridge construction equipment would include cranes, pile drivers, excavators, and concrete pumps. Overhead power lines are located on the east side of the road near the bridge and on the south side of the road east of the bridge. These overhead lines may need to be relocated. Construction staging can occur on County property east of the bridge between the river and existing road.

Construction is expected to begin in 2023 and would require approximately 8 months.

## ***DETERMINATION***

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the County's intent to adopt an MND for this Project. This does not mean that the County's decision regarding the Project is final. This proposed MND is subject to modification based on comments received by interested agencies and the public. The County has prepared an Initial Study for this Project, and pending public review, has determined from this study that the Project would not have a significant effect on the environment for the following reasons:

The Project would have no impact on energy; mineral resources; population and housing; public services; and recreation.

The Project would have a less than significant impact on agriculture and forest resources; land use; and wildfire.

The Project would have less than significant impact with mitigation incorporated on aesthetics; air quality; biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; noise; transportation/traffic; tribal cultural resources; and utilities and services systems.

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## EXECUTIVE SUMMARY

San Joaquin County (County), in coordination with the California Department of Transportation (Caltrans), proposes to replace the Pezzi Road Bridge (Number 29C0199) and improve the approach roadway to the bridge. The bridge is located within an agricultural area in San Joaquin County, approximately 3 miles east of State Route (SR) 99 and north of the town of Waterloo.

The existing Pezzi Road Bridge is on a two-lane rural road across the Calaveras River. It was originally constructed in 1926 and consists of a three-span reinforced concrete T-Beam approximately 63.5 feet long. The deck clear width is approximately 18 feet and is striped for two 9-foot lanes. The bridge is supported by two column piers and diaphragm abutment walls, all of which are founded on shallow spread footings. The Caltrans Structure Inventory and Appraisal Report classifies the bridge as Functionally Obsolete. The most recent County traffic count in March 2018 determined the average daily traffic (ADT) at approximately 420.

Table i below provides a summary of potential impacts to environmental resources from the Pezzi Road Bridge Replacement Project (Project).

This environmental document is prepared in conformance with the requirements of the California Environmental Quality Act (CEQA) Public Resources Code (PRC) 21000-21178. The County is the Lead Agency for CEQA implementation.

**Table i: Summary of Potential Impacts**

Resource	Project Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Aesthetics	Less than significant with mitigation incorporated	Hydroseed and erosion control.
Agriculture and Forest Resources	Less than significant	N/A
Air Quality	Less than significant with mitigation incorporated	Dust and erosion control during construction.
Biological Resources	Less than significant with mitigation incorporated	Environmentally Sensitive Area fencing, pre-construction nesting bird surveys, Swainson's hawk protocol surveys, and measures to reduce impacts to fish.
Cultural Resources	Less than significant with mitigation incorporated	Compliance with regulations relating to discovered human and/or Native American remains.
Energy	No impact	N/A
Geology and Soils	Less than significant with mitigation incorporated	Standard BMPs and Storm Water Management Plan.
Greenhouse Gas Emissions	Less than significant with mitigation incorporated	Comply with all local Air Quality Management District rules, ordinances, and regulations for air quality restrictions.
Hazards and Hazardous Materials	Less than significant with mitigation incorporated	Proper handling of potential hazardous materials.
Hydrology and Water Quality	Less than significant with mitigation incorporated	Standard BMPs and Storm Water Management Plan.
Land Use and Planning	Less than significant	N/A
Mineral Resources	No impact	N/A

<b>Resource</b>	<b>Project Impacts</b>	<b>Summary of Avoidance, Minimization, and/or Mitigation Measures</b>
Noise	Less than significant with mitigation incorporated	Minimize construction-generated noise and comply with County noise ordinance.
Population and Housing	No impact	N/A
Public Services	No impact	N/A
Recreation	No impact	N/A
Transportation/ Traffic	Less than significant with mitigation incorporated	Prepare and implement a Traffic Management Plan.
Tribal Cultural Resources	Less than significant with mitigation incorporated	Compliance with regulations relating to discovered human and/or Native American remains.
Utilities and Service Systems	Less than significant with mitigation incorporated	Standard BMPs and Storm Water Management Plan
Wildfire	Less than significant	N/A
Mandatory Findings of Significance	Less than significant with mitigation incorporated	With mitigation measures in place, all impacts will be reduced to less than significant.

The detailed CEQA checklist summarizing specific Project impacts is included within each of the following sections.

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## LIST OF ABBREVIATIONS

°F	Degrees Fahrenheit
AASHTO	American Association of State Highways and Transportation Officials
AB	Assembly Bill
ADL	Aerially deposited lead
ADT	Average Daily Traffic
APE	Area of Potential Effects
ASR	Archaeological Survey Report
AULs	Activity and Use Limitations
BMPs	Best Management Practices
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCIC	Central California Information Center
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFG	California Fish and Game
CFR	Code of Federal Regulations
CH <sub>4</sub>	Methane
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide

CO <sub>2</sub>	Carbon Dioxide
County	San Joaquin County
CVFPB	Central Valley Flood Protection Board
CWA	Clean Water Act
dBA	Decibel A-weighted
EDR	Environmental Data Resources Inc.
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse gas
GIS	Geographic Information System
HFCs	Hydrofluorocarbons
HPSR	Historic Property Survey Report
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISA	Initial Site Assessment
ITP	Incidental Take Permit
L <sub>dn</sub>	Day-night Average Sound Level
L <sub>eq</sub>	Equivalent Continuous Sound Level
L <sub>max</sub>	Maximum Sound Level
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration

Mph	miles per hour
NPDES	National Pollutant Discharge Elimination System
NAAQS	National Ambient Air Quality Standards
N <sub>2</sub> O	Nitrous Oxide
NAHC	Native American Heritage Commission
NEPA	National Environmental Protection Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
OHWM	Ordinary High Water Mark
OHP	Office of Historic Preservation
Pb	Lead
PCB	Polychlorinated Biphenyl
PFCs	Perfluorocarbons
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter 10 Microns
PM <sub>2.5</sub>	Particulate Matter 2.5 Microns
PRC	Public Resources Code
Project	Pezzi Road Bridge Replacement Project
REC	Recognized Environmental Condition
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SSP	Standard Special Provision

SEWD	Stockton East Water District
SF <sub>6</sub>	Sulfur Hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJCOG	San Joaquin Council of Governments
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO <sub>2</sub>	Sulfur Dioxide
SR	State Route
SRA	Source Receptor Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TCR	Tribal Cultural Resource
U.S.	United States
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
UAIC	United Auburn Indian Community
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VELB	Valley elderberry longhorn beetle
VMT	Vehicle Miles Traveled
VOCs	Volatile organic compounds
WPCP	Water Pollution Control Program

## **1.0 PROJECT**

### **1.1 INTRODUCTION**

San Joaquin County, in coordination with Caltrans, proposes to replace the Pezzi Road Bridge (Number 29C0199) and improve the approach roadway to the bridge. The bridge is located within an agricultural area in the County, approximately 3 miles east of SR 99 and north of the town of Waterloo (Figures 1 and 2).

The existing Pezzi Road Bridge is on a two-lane rural road across the Calaveras River. It was originally constructed in 1926 and consists of a three-span reinforced concrete T-Beam approximately 63.5 feet long. The deck clear width is approximately 18 feet and is striped for two 9-foot lanes. The bridge is supported by two column piers and diaphragm abutment walls, all of which are founded on shallow spread footings. The Caltrans Structure Inventory and Appraisal Report classifies the bridge as Functionally Obsolete. The most recent County traffic count in March 2018 determined the ADT at approximately 420.

### **1.2 PURPOSE**

The purpose of the Project is to replace a functionally obsolete bridge in order to:

- Enhance safety on Pezzi Road by eliminating the two ninety-degree curves in the road and providing a consistent 50 miles per hour (mph) roadway facility over the Calaveras River;
- Provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans.

### **1.3 NEED**

The existing Pezzi Road Bridge is rated “functionally obsolete” by Caltrans under Federal Highway Administration (FHWA) prescribed inspection criteria. Full replacement of the bridge is needed because the current structure does not meet structural design standards.

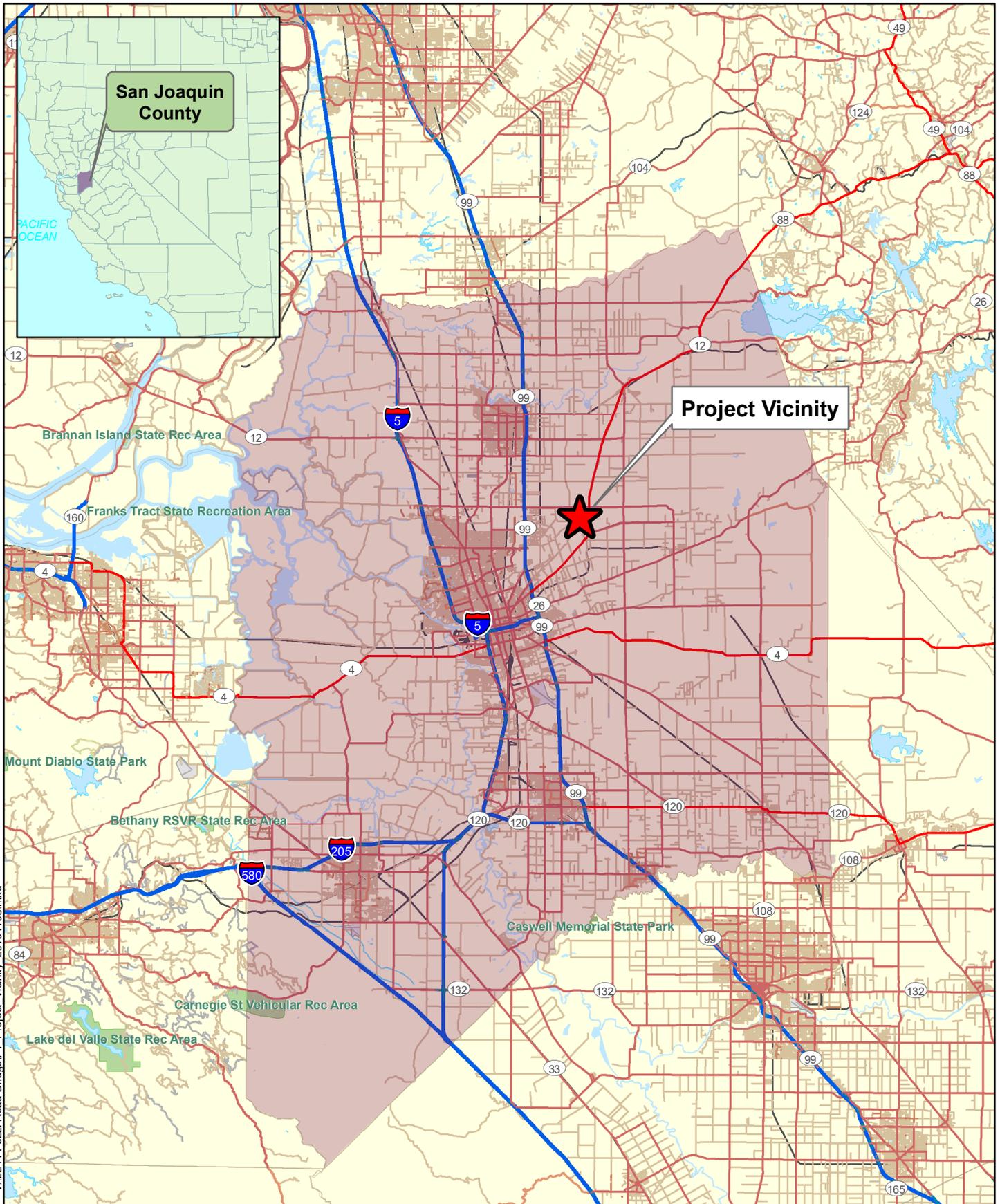
### **1.4 ALTERNATIVES**

Two alternatives are being considered for this Project—the Build Alternative (Figure 3) and the No-Build Alternative.

#### **1.4.1 BUILD ALTERNATIVE**

The Calaveras River is a natural channel and the primary soil type in and around the canal is sandy-silt/silty sand, which makes the foundation of the existing bridge susceptible to scour. The banks of the river are heavily vegetated with blackberry and other small bushes. On the top of the banks are several trees, including native oaks along the southern bank, just east of the bridge.

Pezzi Road is primarily a north-south route with tight, reversing, horizontal curves at the bridge location. The bridge is located near the center of the western curve, although the bridge itself is on a tangent. There is no posted speed so the speed limit defaults to 55 mph; however, there are 15 mph advisory signs when approaching the reversing curves. The roadway is classified as a local road and primarily serves as a connector from East Eight Mile Road to the north, and Waterloo Road (SR 88) to the south, for local property owners and farming operations.

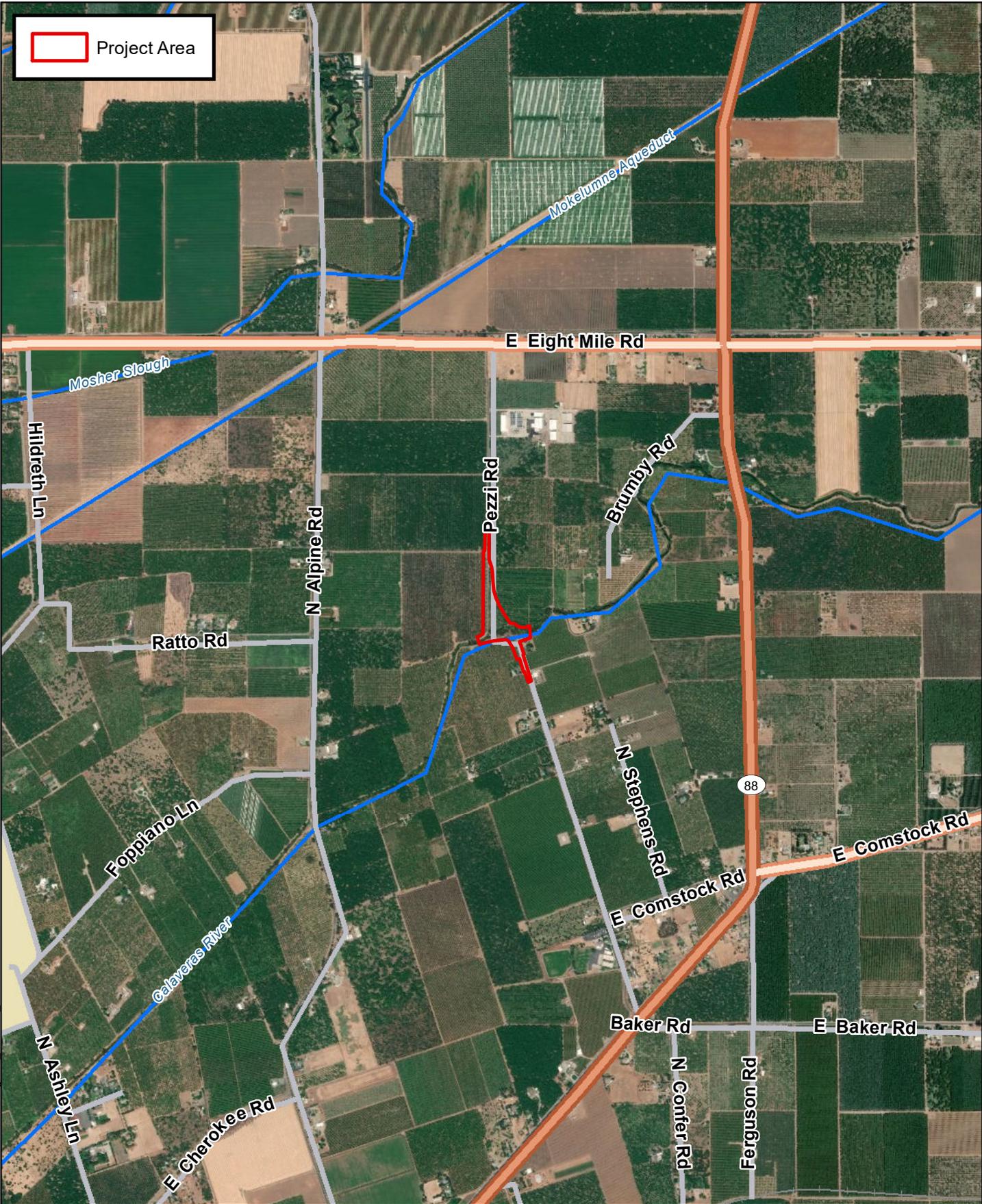


V:\2241 Pezzi Road Bridge\F1 Project\_Vicinity\_20161103.mxd

Source: ESRI 2016; Dokken Engineering 3/9/2017; Created By: brianm



**FIGURE 1**  
**Project Vicinity**  
 Federal Project: BRLO 5929(240)  
 Pezzi Road Bridge Replacement Project  
 San Joaquin County, California



V:\2241 Pezzi Road Bridge\F2 Location 2019-07-03.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 7/8/2019; Created By: adellas



0 0.5 1 Miles

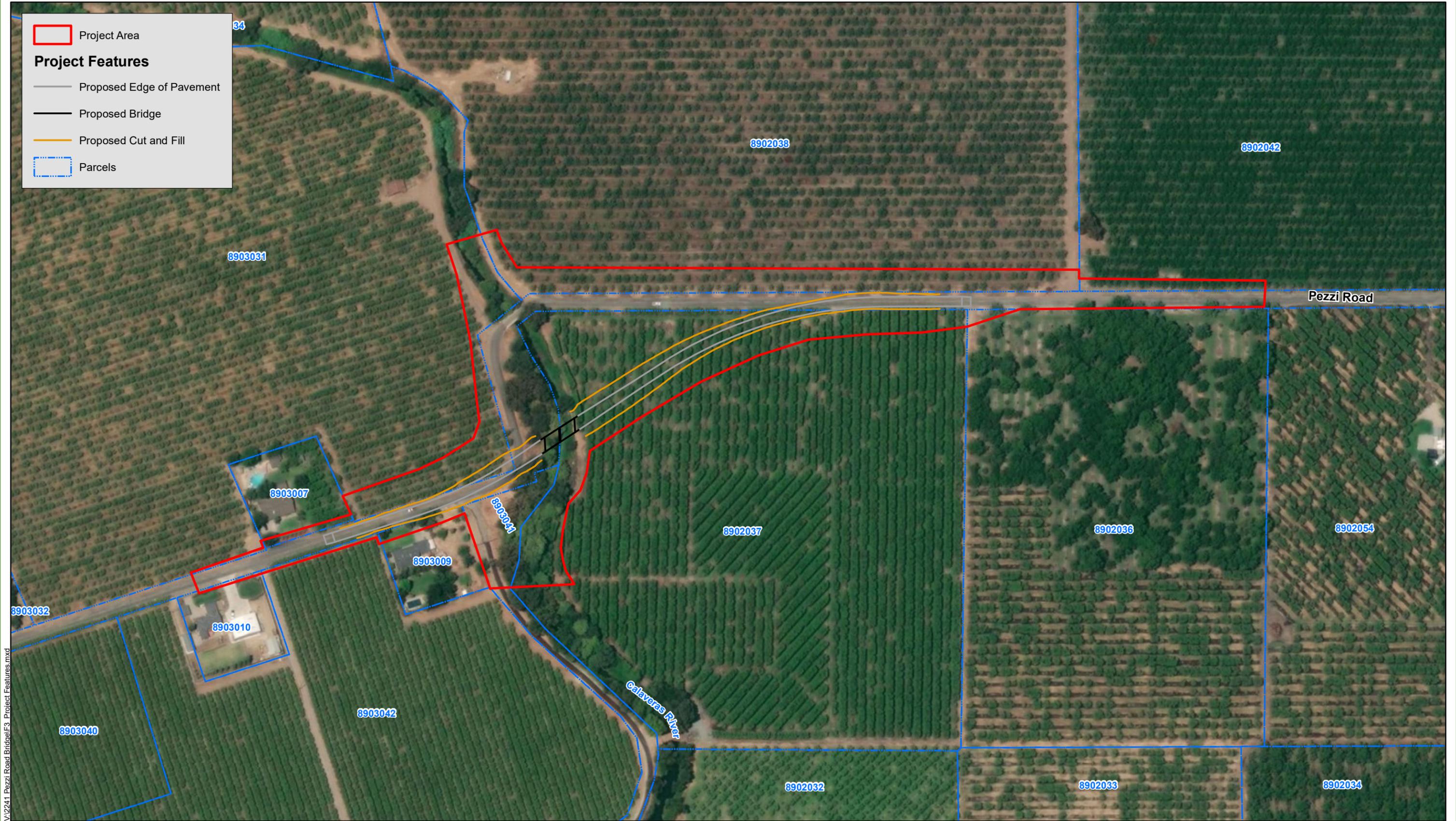
**FIGURE 2**  
**Project Location**  
 Federal Project: BRLO 5929(240)  
 Pezzi Road Bridge Replacement Project  
 San Joaquin County, California

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**Project Area**

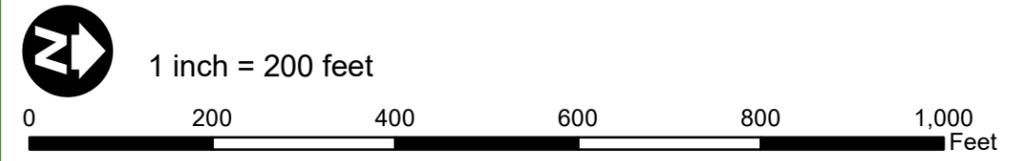
**Project Features**

- Proposed Edge of Pavement
- Proposed Bridge
- Proposed Cut and Fill
- Parcels



V:\2241 Pezzi Road Bridge\F3 Project Features.mxd

Source: ESRI Maps Online; Dokken Engineering 1/24/2020; Created By: hsheldon



**Figure 3**  
**Project Features**

Federal Project: BRLO 5929(240)  
Road 204 Pezzi Road Bridge Replacement Project  
San Joaquin County, California



The proposed Project would replace the substandard bridge with a structure meeting current standards and realign the roadway approaches to replace the sharp curves with a new 50-mph alignment meeting the American Association of State Highways and Transportation Officials (AASHTO Green Book) design specifications. The total improved road length would be approximately 1,570 feet. The new alignment would consist of approximately 1,925-foot radius reversing curves that meet a 50-mph design speed. The new road section would have two 10-foot lanes which widen to 11 feet at bridge and paved shoulders which vary from 1 to 3 feet, for a total width of 22 to 26 feet.

Based on preliminary engineering, the proposed alignment would require right-of-way acquisitions of the orchards to the north and south of the proposed bridge for the roadway footprint, as well as an orchard remnant that would exist between the new and existing roads; however, exact right-of-way needs will be determined during final design, in coordination with the County and through negotiations with local property owners.

The existing bridge would be removed and replaced with an approximately 75-foot long, two-span, cast-in-place reinforced concrete slab bridge on a tangent alignment. The new alignment would move the bridge 250 to 300 feet east of the existing location. Bridge foundations are expected to consist of precast driven piles. Bridge barriers would be concrete Caltrans Type 836.

The existing road and bridge are anticipated to remain open during construction. If a detour was needed, it would be 4.5 miles long with traffic using SR 88 to the east or Alpine Road to the west.

The Stockton East Water District (SEWD) utilizes the river for water deliveries. These cannot be interrupted to maintain normal farming irrigation in the region. The river would be dewatered by methods determined appropriate by the contractor. However, the summer flows are small, and it is anticipated the contractor would use flexible culverts to direct the water away from construction activities.

Typical equipment for roadway construction would include heavy construction earthmoving equipment, dump trucks and pavers. Typical bridge construction equipment would include cranes, pile drivers, excavators, and concrete pumps. Overhead power lines are located on the east side of the road near the bridge and on the south side of the road east of the bridge. These overhead lines may need to be relocated. Construction staging can occur on County property east of the bridge between the river and existing road.

Construction is expected to begin in 2023 and would require approximately 8 months.

#### **1.4.2 NO-PROJECT ALTERNATIVE**

The State CEQA Guidelines (Section 15126[e]) require consideration of a No-Project alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the Project were not approved. Under the No-Build, or “Do Nothing” Alternative, replacement of the Pezzi Road Bridge and improvements to the roadway approach would not be performed. The bridge would continue to deteriorate and no longer meet the sufficiency ratings, thereby placing the public at risk.

#### **1.5 PERMITS AND APPROVALS NEEDED**

Environmental findings within the Project include impacts to water quality, waters of the United States (U.S.) and State, special status species, and the floodway. The following consultations and environmental permits will be obtained prior to the start of construction.

**Table 1: Permit and Approvals Needed**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
Regional Water Quality Control Board	Section 401 Certification	Will be Obtained Prior to Construction
California Department of Fish and Wildlife	1602 Streambed Alteration Agreement	Will be Obtained Prior to Construction
U.S. Fish and Wildlife Service	Section 7 Biological Opinion	Obtained May 18, 2021
National Marine Fisheries Service	Section 7 Biological Opinion	Obtained September 3, 2021
U.S. Army Corps of Engineers	Section 404 Nationwide Permit 14	Will be Obtained Prior to Construction
State Water Resources Control Board	National Pollutant Discharge Elimination System 402 General Permit for Storm Water Discharges Associated with Construction Activity	Will be Obtained Prior to Construction
Central Valley Flood Protection Board	Encroachment Permit	Will be Obtained Prior to Construction

## 2.0 Initial Study

This chapter explains the impacts that the Project would have on the human, physical, and biological environments in the Project area. It describes the existing environment that could be affected by the Project, potential impacts from the alternatives, and avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

### 2.1 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<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"/>

#### **REGULATORY SETTING**

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic and historic environmental qualities (California PRC Section 21001[b]).”

#### **AFFECTED ENVIRONMENT**

A Visual Impact Assessment (Minor Level) was prepared for the proposed Project in March 2019. The Project location and setting provides for the context for determining the type of changes to the existing visual environment. The proposed Project is located on Pezzi Road approximately 2,900 feet south of East 8 Mile Road and approximately 1 mile north of Waterloo Road (SR 88) in unincorporated San Joaquin County, California. The Project is located in the San Joaquin Valley region of central California. The landscape is characterized by agricultural lands, and riparian habitat associated with the Calaveras River. The land use within the Project corridor is primarily agricultural. The Project corridor is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way, and is determined by topography, vegetation, and viewing distance.

The Pezzi Road Bridge (29C0199) over the Calaveras River is classified as a Category 5 - not eligible for listing on the National Register of Historic Places (NRHP) - on the Caltrans Historic Bridge Inventory. No designated scenic vistas are at or near the Project site. Pezzi Road is not a designated scenic highway in the National Scenic Byways Program nor is it a State scenic highway (Caltrans 2007). There are no wild and scenic rivers within the proposed Project corridor.

#### **DISCUSSION**

a) *Have a substantial adverse effect on a scenic vista?*

**No Impact.** No designated scenic vistas are at or near the Project site. Pezzi Road is not a designated scenic highway in the National Scenic Byways Program nor is it a State scenic highway (Caltrans 2017). There are no wild and scenic rivers within the Project corridor. Therefore, no impacts to a scenic vista would result from the Project.

*b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

**No Impact.** The Project Site is not located within a State scenic highway nor is the site visible from a State highway, including any State highways designated as scenic highways. Therefore, no impacts to scenic resources within a State scenic highway would result from the Project.

*c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?*

**Less than Significant Impact.** Visual resources of the Project setting are defined and identified below by assessing *visual character* and *visual quality* in the Project corridor. *Resource change* is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the Project corridor before and after the construction of the proposed Project.

The visual character of the proposed Project will be compatible with the existing visual character of the corridor. Pezzi Road within the proposed Project area runs from East 8 Mile Road to Waterloo Road for a total of approximately 2.10 miles. For the entire length of Pezzi Road, agriculture dominates the visual character of the area including the form, line, color, and texture of the visual environment. The proposed Project would require the removal of a portion of orchard within the proposed Project alignment; however, this minor removal would not drastically alter the form, line, color, or texture of the visual character of the area.

The proposed Project would remove the existing bridge (63.5-foot long by 22-foot wide) and replace it with an approximately 75-foot long by 26-foot wide two-span, cast-in-place reinforced concrete slab bridge. The new bridge would be approximately 550 square feet larger than the existing bridge and the new bridge would include Type 836 “36-inch tall” solid concrete railings. This would differ from the approximately 20-inch tall, substandard existing concrete barrier with arch keyhole type design. The new alignment would move the bridge 250 to 300 feet east of the existing location, removing some natural vegetation within the new bridge and roadway footprint. With the removal of the existing bridge and replacement of the larger bridge and solid concrete railings, a moderate change of the visual resources would occur; however, these changes would not drastically alter the form, line, color, and texture of the visual character of the area.

Pattern elements of form, line, color, and texture would remain intact through the proposed Project corridor. Therefore, visual character of the proposed Project area would be compatible with the existing visual character of the area.

- Form elements (flat agricultural areas) would remain intact;
- Line elements (agricultural rows) would remain similar as a result of the minor impacts to the orchard area;
- Color elements (green composition of trees, riparian areas, and irrigated croplands) would remain intact; and
- Texture elements (agricultural cropland and orchards) would remain similar to the existing setting as a result of the minor impacts to the orchard area.

The visual quality of the existing corridor will not be altered by the proposed Project. The vividness of the Project site is considered moderately low due to the continuous agricultural lands, small riparian area, and adjacent rural residences. The intactness of the site is moderately low due to amount of existing agricultural landscape and the man-made roadway. Unity of the site is low, as there is a minimal amount of natural vegetation (riparian area associated with Calaveras River) and the area is dominated by flat agriculture areas.

Resource change (changes to visual resources as measured by changes in visual character and visual quality) will be low. Visual character and quality of the proposed Project will be similar to the existing visual character and quality of the Project area in its current state as shown in the following representative photographs:



**Photograph 1:** Representative existing Pezzi Road Bridge, Calaveras River and associated riparian habitat. Photo taken east of Pezzi Road Bridge facing west.



**Photograph 2:** Adjacent rural residence and orchards along Pezzi Road.  
Photo taken south of Pezzi Road Bridge facing south.



**Photograph 3:** Adjacent orchards in background along Pezzi Road.  
Photo taken at Pezzi Road Bridge facing north.



**Photograph 4:** Adjacent orchards to the east and west of Pezzi Road.  
Photo taken north of Pezzi Road Bridge facing north.

*Neighbors* (people with views *to* the road) and *highway users* (people with views *from* the road) will be affected by the proposed Project. For the neighbor's viewer group, the local rural-residential neighbor's viewer exposure would be considered high and the awareness of residents was rated high as the 3 rural residences are directly adjacent to Pezzi Road. The duration of these viewers is high, due to their long term and constant presence in the area.

Neighbor's response to visual changes would be considered moderate. A high rating of sensitivity due to the proximity to Pezzi Road and the amount of time spent in the area; however, there would only be a low degree of change to views. The awareness of this group is considered high as the resident's view of the proposed Project area is within close proximity. The aesthetics of the Project area is unlikely to be highly valued by the residents considering the existing level of urban infrastructure (road and bridge) within the existing rural area.

For highway users, viewer exposure is moderately-high. The location of the motorists is rated high, as the motorists would travel along the newly aligned roadway and bridge replacement. The quantity of motorists that would travel this section of the road would be low as the corridor is anticipated to be used predominately by residents and agricultural equipment. The duration of these viewers would be moderately-low, due to the rate of speed that the road would operate at, and the small length of the Project segment.

The highway users viewer group would have low sensitivity due to the short time span spent along the proposed Project. The highway users' activity level within the Project area is high as they are traveling on the roadway and not able to be engaged in observing their surroundings. The awareness of motorists is low as it is focused on the roadway and not the surrounding agricultural environment. The aesthetics of the Project area is unlikely to be valued by the motorists considering the existing level of visual character and quality. It is anticipated that the average response of all viewer groups would be moderately-low.

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. The Project is expected to have minimal permanent and temporary visual impacts from Project construction. The Project is characterized to have an overall visual impact of low. In consideration of the no-build alternative, not re-aligning Pezzi Road and replacing the Pezzi Road bridge would cause continued safety issues of the roadway's reversing curves and structurally deficient bridge. The proposed Project would replace the substandard bridge with a structure meeting current standards, and realign the roadway approach to replace the sharp curves with a new 55 mph alignment. Since the Project does not change the existing land uses and adds a minor amount of new paved surfaces, the visual character would not change substantially.

#### Tree and Vegetation Removal

Within the Central Valley, an area of valley foothill riparian vegetation is found within the proposed Project area. This area is comprised of native and non-native vegetation including valley oak (*Quercus lobata*), boxelder (*Acer negundo*), blue elderberry (*Sambucus nigra ssp. caerulea*), Himalayan blackberry (*Rubus armeniacus*), and blessed milk thistle (*Silybum marianum*). While some riparian habitat would be removed, this would not substantially change the visual quality of the site. As a wooded area, numerous trees would remain in view of the replacement bridge, and all trees along the edge of construction would be trimmed rather than removed where possible. All temporary impacts to riparian areas would be re-contoured to pre-construction conditions, and re-vegetated with a native seed mix, and all permanent impacts will be mitigated for at an agency approved mitigation ratio at an on or off-site agency approved location or a combination of both.

With the implementation of measures **VIA-1** through **VIA-6**, impacts would be less than significant.

- d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**No Impact.** The Project would not substantially affect light and glare. No new lighting is proposed. Construction activities would temporarily introduce equipment and vehicles to the Project site; however, work would take place during daylight hours and no construction lighting is anticipated. The Project would not result in substantial additional light or glare that would adversely affect day or nighttime views in the Project area; therefore, there will be no impact.

#### **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

**VIA-1:** Landscape architecture considerations shall be implemented as directed by the Department's Highway Design Manual, Chapter 900, and the Department's Landscape Architecture PS&E Guide. As such, highway planting, lighting plans, and aesthetic treatment would be incorporated into the Project as appropriate. This would also include coordination between the Department's Landscape Architecture staff for areas within state right-of-way as well as with San Joaquin County.

**VIA-2:** Caltrans Standard Specifications (2018) "Erosion Control" will be followed during construction. At the conclusion of construction, areas of bare soil shall be hydroseeded with native seed mix to prevent or at least minimize erosion. Hydroseeding will follow Standard Special Provision (SSP) 21-2.03D for Erosion Control (Hydroseed).

**VIA-3:** Vegetation clearing would only occur within the delineated Project boundaries in an effort to minimize the impacts. Trees located in areas along the edge of the construction zone would be trimmed whenever possible and only those trees that lie within the active construction areas would be removed.

- VIA-4:** All disturbed areas including staging of vehicles and equipment will be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.
- VIA-5:** Permanent impacts to riparian vegetation within construction limits will be mitigated for at an agency approved mitigation ratio at an on or off-site agency approved location or a combination of both.
- VIA-6:** The contractor will be required to maintain good housekeeping in and around construction sites, staging areas, and equipment storage areas.

***FINDINGS***

The Project would have **Less than Significant Impacts with Mitigation** relating to aesthetics.

## 2.2 AGRICULTURE AND FOREST RESOURCES

Would the Project: Potentially Significant Impact Less Than Significant with Mitigation Less Than Significant Impact No Impact

### II. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

### DISCUSSION

- 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?*

**Less than Significant Impact.** To identify Prime and Unique Farmland within the Project area, an examination of the soils on the Natural Resource Conservation Service (NRCS) website was performed. Based on preliminary engineering, the proposed alignment would require right-of-way acquisitions of the orchards to the north and south of the proposed bridge for the roadway footprint, as well as an orchard remnant that would exist between the new and existing roads. Approximately 2.23 acres of Prime Farmland and 0.25 acres of Unique Farmland would be acquired and converted as a result of the roadway improvements associated with the Project. Temporary construction easements would indirectly affect 4.52 acres of Prime Farmland and 1.0 acres of Unique Farmland. A NRCS-CPA-106 form was completed and submitted to the NRCS for review on July 21, 2020. NRCS determined that the Project would have negligible impacts to Prime and Unique Farmland, or any land protected by the Farmland Protection Policy Act, as documented in the attached NRCS correspondence dated July 23, 2020 (Appendix A). Therefore, the Project would have less than significant impacts to farmland soils.

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

**Less than Significant Impact.** The Project would not conflict with existing zoning for agricultural use. There is Williamson Act contract land directly adjacent to the Project area, east of Pezzi Road; however, permanent acquisition of this property for roadway improvements would not be

required. The Project would only result in temporary impacts due to construction and is consistent with state and local farmland protection programs and policies; therefore, the Project would have less than significant impacts on farmland and Williamson Act contract land.

- 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))?*

**No Impact.** There are no forests or timberland located within the Project area; therefore, the Project would have no impact with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

- d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

**No Impact.** There are no forests or forest resources located within the Project area; therefore, the Project would not result in the loss of forest land or conversion of forest land to non-forest use.

- e) *Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

**No Impact.** The land adjacent to Pezzi Road and Pezzi Road Bridge would continue to be used for agriculture; therefore, the Project would not result in the additional conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

#### ***FINDINGS***

The Project would have **Less than Significant** impacts relating to agriculture and forest resources.

## 2.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

### **REGULATORY SETTING**

The Clean Air Act (CAA) as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California CAA of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM), lead (Pb), and sulfur dioxide (SO<sub>2</sub>).

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO<sub>2</sub>, O<sub>3</sub>, and PM. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTPs) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the CAA are met. If the conformity analysis is successful, the regional planning organization, such as the San Joaquin Valley Air Pollution Control District (SJVAPCD) for San Joaquin County, and the appropriate federal agencies, such as the FHWA, make the determination that the RTP is in conformity with the State Implementation Plan (SIP) for achieving the goals of the CAA. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the transportation project are the same as described in the RTP, then the project is deemed to meet regional conformity requirements for purposes of project-level analysis.

### **Federal and State Ambient Air Quality Standards**

California and the federal government have established standards for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The pollutants of greatest concern in the Project area are O<sub>3</sub>, PM 2.5 microns (PM<sub>2.5</sub>) and PM 10 microns (PM<sub>10</sub>).

## **State Regulations**

Responsibility for achieving California's air quality standards, which are more stringent than federal standards, is placed on the California Air Resources Board (CARB) and local air districts, and is to be achieved through district-level air quality management plans that will be incorporated into the SIP. In California, the Environmental Protection Agency (EPA) has delegated authority to prepare SIPs to the CARB, which, in turn, has delegated that authority to individual air districts.

The CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The California CAA of 1988 substantially added to the authority and responsibilities of air districts. The California CAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The California CAA focuses on attainment of the state ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards.

The California CAA requires designation of attainment and non-attainment areas with respect to state ambient air quality standards. The California CAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates state air quality standards for CO, SO<sub>2</sub>, NO<sub>2</sub>, or O<sub>3</sub>. These Clean Air Plans are specifically designed to attain these standards and must be designed to achieve an annual 5% reduction in district-wide emissions of each non-attainment pollutant or its precursors. Where an air district is unable to achieve a 5% annual reduction, the adoption of "all feasible measures" on an expeditious schedule is acceptable as an alternative strategy (Health and Safety Code Section 40914(b)(2)). No locally prepared attainment plans are required for areas that violate the state PM<sub>10</sub> standards.

The California CAA requires that the state air quality standards be met as expeditiously as practicable but, unlike the federal CAA, does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides CARB recommendations for the siting of new sensitive land uses (including residences) near freeways, distribution centers, ports, refineries, chrome plating facilities, dry cleaners, and gasoline stations. The handbook recommends that new development be placed at distances from such facilities.

## **AFFECTED ENVIRONMENT**

The proposed Project is located within the San Joaquin Valley Air Basin and is under the auspices of the SJVAPCD. No additional capacity is proposed (no new through- or turn-lanes) and the Project would not result in any new trips, vehicle miles traveled, or vehicle hours traveled in the permanent condition. Table 1 of the Caltrans Transportation Project-Level Carbon Monoxide Protocol lists specific types of projects that are exempt from all emissions analyses for determining air quality conformity. Included in the list is "Widening narrow pavements or reconstructing bridges (no

additional travel lanes)”. Additionally, since the Project is consistent with these requirements, the Project will not be increasing operational traffic and it is assumed to be consistent with SJVAPCD and is exempt from local conformity review.

**DISCUSSION**

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

**No Impact.** The Project is consistent with the site land use and zoning, and construction of the Project would not conflict with or obstruct implementation of any air quality plan. The Project is included in the San Joaquin Council of Governments (SJCOG) final conformity analysis for the 2019 Federal Transportation Improvement Program (FTIP) (SJCOG 2018) as an exempt project under code 4.12 as “Transportation enhancement activities”. Therefore, the Project would not conflict with or obstruct implementation of the applicable air quality plan.

b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?*

**Less than Significant Impact with Mitigation.** The CARB is required to designate areas of the state as attainment, non-attainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “non-attainment” designation indicates that a pollutant concentration violated the standard at least once within a calendar year. The area air quality attainment status of San Joaquin County is shown in Table 2.

All construction impacts to air quality would be short-term and intermittent; therefore, impacts are anticipated to be less than significant. The emission of pollutants during construction would not contribute significantly to a net increase of any criteria pollutant. No long-term, operational impacts are anticipated.

**Table 2: NAAQS and CAAQS Attainment Status for San Joaquin County**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 8-Hour	No Federal Standard	Non-attainment/Severe
Ozone – 1-Hour	Non-attainment/Extreme	Non-attainment
PM <sub>10</sub>	Attainment	Non-attainment
PM <sub>2.5</sub>	Non-attainment	Non-attainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Sulfates	No Federal Standard	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Sources: CARB 2019

**Operational Emissions**

The proposed Project is not a capacity increasing project and would not cause a change in the traffic patterns. Since there would be no change in operating conditions or lane configuration and traffic would not increase after construction, there would be no additional regional or local air emissions and no impact on air quality. Accordingly, the proposed Project would not exceed the applicable

thresholds of significance for air pollutant emissions during operation. Therefore, operation of the Project would not result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is in non-attainment.

**Construction Emissions**

Construction activities associated with the replacement of Pezzi Road bridge and realignment of Pezzi Road would result in temporary incremental increases in air pollutants, such as O<sub>3</sub> precursors and PM due to operation of gas-powered equipment and minor land disturbance. However, the proposed construction activities would be temporary in nature and are not anticipated to generate large amounts of dust or particulates. Additionally, the Project will be implementing best available control measures, as required by AQ-1 through AQ-3, to reduce dust and particulate spreading.

The Project's construction is anticipated to take 8 months. The Project's construction emissions were estimated using the Roadway Construction Emissions Model by the Sacramento Metropolitan Air Quality Management District (SMAQMD 2014), which is the accepted model for all CEQA roadway projects throughout California. The Roadway Construction Emissions Model results are compared with the SJVAPCD Air Quality Significance Thresholds in Table 3. As summarized in Table 3, construction activities from the Project would not exceed emission thresholds established by the SJVAPCD.

**Table 3: SJVAPCD Air Quality Thresholds of Significance – Criteria Pollutants**

Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
CO	100 tons per year (~540 lbs per day)	100 tons per year (~540 lbs per day)	100 tons per year (~540 lbs per day)
NO <sub>x</sub>	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)
ROG	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)
SO <sub>x</sub>	27 tons per year (~145 lbs per day)	27 tons per year (~145 lbs per day)	27 tons per year (~145 lbs per day)
PM <sub>10</sub>	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)
PM <sub>2.5</sub>	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)

Source: SJVAPCD (2015)

All construction activities would follow the SJVAPCD rules and would implement all appropriate air quality Best Management Practices (BMPs), including minimizing equipment idling time and use of water or similar chemical palliative to control fugitive dust. The implementation of AQ-1 through AQ-3 would also be used to minimize effects of impacts on air quality due to construction. These measures provide compliance guidelines for minimizing fugitive dust to protect sensitive receptors in the vicinity. With implementation of AQ-1 through AQ-3 construction emissions would result in a less than significant impact.

*c) Expose sensitive receptors to substantial pollutant concentrations?*

**Less than Significant Impact.** During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include CO, nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), directly emitted PM<sub>10</sub> and PM<sub>2.5</sub>, and

toxic air contaminants (TACs) such as diesel exhaust PM. Construction activities are not expected to result in any changes to traffic congestion as the bridge will remain open during construction.

**Localized Construction Analysis**

The nearest sensitive receptors are within 500 feet from the construction area within the Project boundaries. The SJVAPCD Air Quality Significance thresholds for construction (Table 2) represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, and other applicable criteria.

Construction emissions were estimated using the latest Sacramento Metropolitan Air Quality Management District’s Road Construction Model, Version 9.0.0 (SMAQMD 2019). Construction-related emissions for the proposed Project are presented in Table 4. The emissions presented are based on the best information available at the time of calculations. The emissions represent the peak daily construction emissions that would be generated by construction of the proposed Project.

**Table 4: Construction Emissions from Construction Activity.**

	CO (lbs/day)	NOx (lbs/day)	ROG (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
<b>Grubbing/Land Clearing</b>	6.21	7.38	0.72	0.02	5.31	1.32
<b>Grading/Excavation</b>	20.86	26.42	2.54	0.05	6.10	2.01
<b>Drainage/Utilities/ Sub-Grade</b>	24.00	24.11	2.50	0.05	6.04	2.00
<b>Paving</b>	10.81	7.59	0.79	0.02	0.40	0.34
<b>Maximum daily (lbs/day)</b>	24.00	7.59	0.79	0.05	6.10	2.01
<b>Project Total (tons/construction project)</b>	<b>1.67</b>	<b>1.84</b>	<b>0.18</b>	<b>0.00</b>	<b>0.45</b>	<b>0.15</b>

Emissions from construction activities associated with the Project would not exceed the SJVAPCD significance thresholds for criteria pollutants.

**Toxic Air Contaminants**

The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used during construction. These substances would comply with all applicable SJVAPCD rules for their manufacture and use. The proposed bridge rehabilitation and maintenance Project would have no permanent impact on sensitive receptors. Therefore, impacts relating to pollutant concentrations during construction are less than significant.

- d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

**Less than Significant Impact.** The Project site is located within an agricultural area and would not produce substantial quantities of other emissions that could lead to odors during construction that would affect the surrounding rural residents; therefore, the Project would have a less than significant impact on air quality and other emissions.

### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

The following measures would be implemented as part of the Project to minimize short term construction related air quality emissions.

- AQ-1:** The construction contractor shall comply with Caltrans' Standard Specifications Section 14-11.04 Dust Control of Caltrans' Standard Specifications (2018).
- AQ-2:** The construction contractor shall comply with Section 7-1.02C Emissions Reduction and Section 18 Dust Palliative of Caltrans' Standard Specifications (2018).
- AQ-3:** The Wind Erosion Control BMP (WE-1) from Caltrans' Construction Site *Best Management Practices Manual* will be implemented as follows:
- Water shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
  - All distribution equipment shall be equipped with a positive means of shutoff.
  - Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the Project.
  - If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board (RWQCB) requirements. Non-potable water shall not be conveyed in tanks or drainpipes that will be used to convey potable water and there shall be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances shall be marked "NON-POTABLE WATER – DO NOT DRINK."
  - Materials applied as temporary soil stabilizers and soil binders will also provide wind erosion control benefits.

### ***FINDINGS***

The Project would have **Less than Significant Impacts with Mitigation** relating to air quality.

## 2.4 BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game U.S. Fish and Wildlife Service, or NOAA Fisheries?	<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 California Department of Fish and Game or US Fish and Wildlife Service?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***REGULATORY SETTING***

This section describes the Federal, State, and local plans, policies, and laws that are relevant to biological resources within the Biological Study Area (BSA). Applicable Federal permits and approvals that will be required before construction of the Project are provided in Section 1.5.

#### **Federal Regulations**

##### **National Environmental Policy Act**

The National Environmental Policy Act (NEPA) provides an interdisciplinary framework for environmental planning by Federal agencies and contains action-forcing procedures to ensure that Federal agency decision makers take environmental factors into account. NEPA applies whenever a Federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect environmental resources. Caltrans, under delegation from the FHWA, is the NEPA lead agency for this Project.

##### **Federal Endangered Species Act**

The Federal Endangered Species Act (FESA) of 1973 (16 U.S. Code (U.S.C.) section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to Section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These species and resources have been identified by U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS).

##### **Clean Water Act**

The Clean Water Act (CWA) was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. The CWA serves as the primary Federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. CWA empowers the U.S. EPA to set national water quality standards and effluent limitations, and includes programs

addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool. This Project will require a CWA Section 402 National Pollutant Discharge Elimination System (NPDES) Permit regulated by the EPA.

The U.S. Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into waters of the U. S. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

The RWQCB has jurisdiction under Section 401 of the CWA and regulates any activity which may result in a discharge to surface waters. Typically, the areas subject to jurisdiction of the RWQCB coincide with those of USACE (i.e., waters of the U.S. including any wetlands). The RWQCB also asserts authority over "waters of the State" under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

#### **Executive Order 13112: Prevention and Control of Invasive Species**

Executive Order (EO) 13112 (signed February 3, 1999) directs all Federal agencies to prevent and control introductions of invasive species in a cost-effective and environmentally sound manner. The EO and directives from the FHWA require consideration of invasive species in NEPA analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them.

#### **Executive Order 13186: Migratory Bird Treaty Act**

EO 13186 (signed January 10, 2001) directs each Federal agency taking actions that could adversely affect migratory bird populations to work with USFWS to develop a Memorandum of Understanding that will promote the conservation of migratory bird populations. Protocols developed under the Memorandum of Understanding will include the following agency responsibilities:

- Avoid and minimize, to the maximum extent practicable, adverse impacts on migratory bird resources when conducting agency actions;
- Restore and enhance habitat of migratory birds, as practicable; and
- Prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds, as practicable.

The EO is designed to assist Federal agencies in their efforts to comply with the Migratory Bird Treaty Act (MBTA) (50 Code of Federal Regulations (CFR) 10 and 21) and does not constitute any legal authorization to take migratory birds. Take is defined under the MBTA as "the action of or attempt to pursue, hunt, shoot, capture, collect, or kill" (50 CFR 10.12) and includes intentional take (i.e., take that is the purpose of the activity in question) and unintentional take (i.e., take that results from, but is not the purpose of, the activity in question).

## **State Regulations**

### **California Environmental Quality Act**

California State law created to inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and to work to reduce these negative environmental impacts. San Joaquin County is the CEQA lead agency for this Project.

### **California Endangered Species Act**

The California Endangered Species Act (CESA) (California Fish and Game (CFG) Code Section 2050 et seq.) requires the California Department of Fish and Wildlife (CDFW) to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080-2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

CESA also requires the CDFW to comply with CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating Incidental Take Permit (ITP) applications (CFG Code Section 2081(b) and California Code Regulations, Title 14, section 783.0 et seq.), and the potential impacts the Project or activity for which the application was submitted may have on the environment. CDFW's CEQA obligations include consultation with other public agencies which have jurisdiction over the Project or activity [California Code Regulations, Title 14, Section 783.5(d)(3)]. CDFW cannot issue an ITP if issuance would jeopardize the continued existence of the species [CFG Code Section 2081(c); California Code Regulations, Title 14, Section 783.4(b)].

### **Section 1602: Streambed Alteration Agreement**

Under CFG Code 1602, public agencies are required to notify CDFW before undertaking any project that will divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occurs during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

### **Section 3503 and 3503.5: Bird and Raptors**

CFG Code Section 3503 prohibits the destruction of bird nests and Section 3503.5 prohibits the killing of raptor species and destruction of raptor nests. Trees and shrubs are present in and adjacent to the study area and could contain nesting sites.

### **Section 3513: Migratory Birds**

CFG Code Section 3513 prohibits the take or possession of any migratory non-game bird as designated in the MBTA or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

## ***AFFECTED ENVIRONMENT***

Online databases from the USFWS, NMFS, California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) were used to generate a list of special status species with potential off occurring in the vicinity of the Project area.

The BSA was used to generate an official species list through the Information for Planning and Consultation online tool operated by USFWS. The NMFS official species list was also obtained through the Information for Planning and Conservation operated by USFWS. The following six United States Geological Survey (USGS) 7.5-minute quadrangles were used to generate the CNDDB and CNPS search results: Waterloo, Stockton East, Lodi South, Linden, Stockton West and Lockeford. On March 28, 2017 and June 27, 2019, general biological surveys, habitat assessments, and a delineation of jurisdictional waters was conducted by Dokken Engineering

biologist Scott Salembier. General biological surveys included walking meandering transects, observing vegetation communities, compiling notes on observed flora and fauna, and assessing the potential for existing habitat within the BSA to support sensitive plants and wildlife. The BSA was defined by using a 100-foot buffer around all anticipated work areas, staging areas, and access routes for construction. The BSA is approximately 1,850 feet long east-west, approximately 2,669 feet long, and approximately 26 acres in total size (Figure 4).

## **Physical Conditions**

### **Topography**

The BSA is in the Waterloo USGS 7½ minute quadrangle (T2N & R7E, S3). Since the Project is located in the Central Valley, the topography is relatively flat, with elevation within the BSA approximately 59-65 feet above mean sea level. Topographic features within the area include Mosher Creek approximately 0.9 miles north of the BSA and Mormon Slough approximately 5.8 miles south of the BSA.

### **Soils**

Soil units within the BSA include Archerdale clay loam, 0 to 2 percent slopes, Cogna loam, 0 to 2 percent slopes, and Stockton fine sandy loam, 0 to 2 percent slopes, overwashed (National Resources Conservation Services [NRCS], 2019). Soils within the BSA are somewhat poorly drained to well drained and have a medium runoff class (NRCS 2019).

### **Hydrological Resources**

Based on survey results and the USGS 7½ minute quadrangle topographical map, the Calaveras River occurs within the BSA. The Calaveras River is approximately 51 miles long and lies within the San Joaquin River watershed. The Calaveras River originates in New Hogan Reservoir approximately 23 miles northeast of the Project area. The Calaveras River flows east to west through the Project area and confluences with the San Joaquin River approximately 11 river miles downstream of the BSA.

### **Land Cover Types**

Land use within the BSA consists of rural mixed residential and small-scale agriculture. The BSA has been highly disturbed by ongoing agriculture and natural vegetative communities have been invaded by introduced exotic species. The BSA consists of three developed land cover types and two undeveloped land cover types (Figure 4).

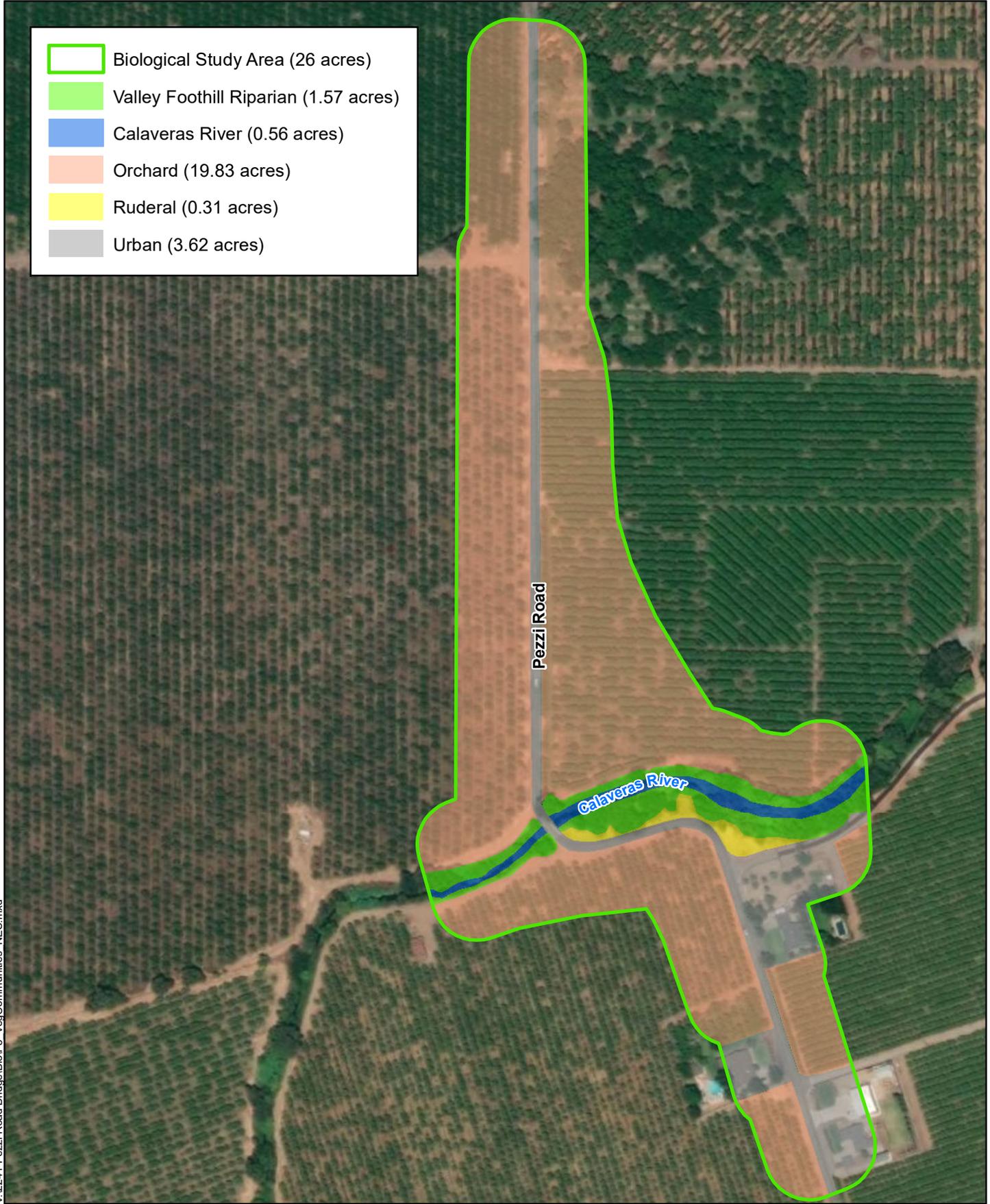
#### *Developed Land Covers*

##### Ruderal/Disturbed

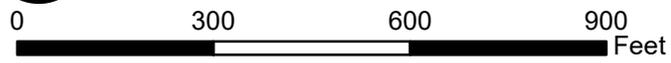
Ruderal/disturbed lands typically occur adjacent to roadways, drainage ditches, and developed areas. These areas are highly disturbed and dominated by annual invasive species. Dominant species in this vegetation community within the BSA includes blessed milk thistle (*Silybum marianum*), and doveweed (*Croton setiger*). This vegetation community constitutes roughly 0.31 acres (1%) of the BSA.

- Biological Study Area (26 acres)
- Valley Foothill Riparian (1.57 acres)
- Calaveras River (0.56 acres)
- Orchard (19.83 acres)
- Ruderal (0.31 acres)
- Urban (3.62 acres)

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Source: ESRI World Street Maps Online; Dokken Engineering 2/13/2020; Created By: hsheldon



### Waters and Vegetation Communities Within the BSA

**FIGURE 4**

Federal Project: BRLO 5929(240)  
 Pezzi Road Bridge Replacement over Calaveras River  
 San Joaquin County, California

### Urban

Urban areas are characterized by structures, landscaping, pavement, dirt roads, and other disturbed areas. Landscaping within the BSA generally consists of lawns, and non-native trees and shrubs. Three residences occur within the BSA and constitute roughly 3.62 acres (14%) of the BSA.

### Orchard-Vineyard

Orchards are typically single species tree dominated habitats and vineyards are typically single species planted in rows, often supported with wire or wood trellises. The dominant species in this habitat within the BSA include almonds and cherries. Orchard-Vineyard occupies 19.83 acres (approximately 77%) of the BSA.

### Undeveloped Land Covers

#### Riverine

The Old Calaveras River (Riverine) is the only riverine feature within the BSA and the only surface water feature. The Old Calaveras River (Riverine) carries seasonal flow that is controlled by releases from the New Hogan Dam which are then diverted into either the Old Calaveras River (Riverine) or the Mormon Slough by the Bellota Weir located at the confluence of these two channels. The weir is operated by the SEWD for irrigation purposes. Riverine makes up 0.56 acres (approximately 2%) of the BSA.

#### Valley Foothill Riparian

Within the Central Valley, valley foothill riparian corridors are typically comprised of cottonwood (*Populus sp.*), California sycamore (*Platanus racemosa*), and valley oak (*Quercus lobata*), with typical understory species including wild grape, wild rose (*Rosa californica*), California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus nigra ssp. caerulea*), poison oak (*Toxicodendron diversilobum*), buttonbush (*Cephalanthus occidentalis*), and willows in close proximity to a water source. Transition to adjacent non-riparian vegetation is usually abrupt, especially near agriculture (Cheatham and Haller 1975). The dominant species in this habitat type within the BSA include a valley oak (*Quercus lobata*), boxelder (*Acer negundo*), and blue elderberry sub canopy, and an understory of Himalayan blackberry (*Rubus armeniacus*) and blessed milk thistle (*Silybum marianum*). Valley foothill riparian makes up 1.57 acres (approximately 6%) of the BSA.

### **DISCUSSION**

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?*

**Less Than Significant Impact with Mitigation.** The following is a discussion on special status plant and animal species that were determined have potential of occurring with the Project area, potential impacts, and avoidance, minimization, and mitigation measures that when incorporated will reduce impacts to a less than significant impact.

### **Special-Status Plants**

The Natural Environment Study (NES) (Dokken Engineering 2020a) serves as basis for much of this section. Prior to field surveys, a review of CNDDDB, CNPS and online databases found that there was no potential for special status plant species to occur in the Project vicinity. Additionally, surveys conducted June 27, 2019 did not observe any special status plant species within the BSA. No impacts to special status plant species are anticipated; therefore, no compensatory mitigation or minimization measures are will be necessary. All special status plant species are

presumed absent from the BSA. The Project would have no impacts to special status plant species.

### **Special-Status Animals**

Prior to field surveys, online database searches returned 18 special-status animal species that have been documented within the vicinity of the BSA (Appendix B). Based on an assessment of available habitats within the BSA, the habitat requirements of each species, and an assessment of each species' historic and current distribution, it was determined that three special-status animal species have the potential of occurring within the BSA, including Swainson's hawk (*Buteo swainsoni*), Central Valley steelhead (*Oncorhynchus mykiss irideus*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Each species is discussed individually below.

#### **Swainson's Hawk**

The Swainson's hawk is State-listed as threatened. Swainson's hawk migrates annually from wintering areas in South America to breeding locations in northwestern Canada, the western U.S., and Mexico. In California, Swainson's hawk nest throughout the Sacramento and San Joaquin Valleys in large trees in riparian habitats and in isolated trees in or adjacent to agricultural fields. The breeding season extends from late March through late August, with peak activity from late May through July (England et al. 1997). Swainson's hawks forage in large, open agricultural habitats, including alfalfa and hay fields. The breeding population in California has declined by an estimated 91% since 1900; this decline is attributed to the loss of riparian nesting habitats and the conversion of native grassland and woodland habitats to agriculture and urban development (CDFW 1994).

#### ***Swainson's Hawk Survey Results***

Tall oak and cottonwood trees within the BSA provide potentially suitable riparian nesting habitat, however they are surrounded by orchards, which is not suitable foraging habitat for Swainson's hawks. During the March 2017 biological survey, one individual hawk was identified flying over the BSA. During the June 2019 biological survey, two individual hawks were identified flying southeast of the BSA. The nearest CNDDDB occurrence is approximately 0.8 miles northeast of the BSA, along Brumby Road, recorded in 2000. However, since 2000, the usage of the surrounding agricultural land has changed from primarily open fields (once suitable habitat) to orchards. None of the individual hawks observed in the 2017 and 2019 surveys were seen nesting within or adjacent to the BSA. Due to the lack of suitable foraging habitat, despite identification of Swainson's hawks during biological surveys, the species is considered to have a low to moderate potential of utilizing the BSA or adjacent riparian habitat for nesting.

#### ***Project Impacts to Swainson's Hawk***

With the inclusion of avoidance and minimization measures, direct impacts to Swainson's hawk are not anticipated. Project impacts will be limited to the temporary loss of approximately 3 mature riparian trees that may provide nesting habitat for raptors. In addition, with the inclusion of compensatory mitigation for Project impacts to the Calaveras River riparian corridor, the Project will not result in take of Swainson's hawk. With the avoidance of take, the Project does not anticipate that a CDFW Section 2081 ITP for Swainson's hawk will be necessary.

#### ***Swainson's Hawk Avoidance and Minimization Efforts***

To avoid and minimize potential Project impacts to Swainson's hawk, measure BIO-11 shall be implemented.

### *Compensatory Mitigation for Swainson's Hawk*

With the inclusion of avoidance and minimization measures, direct impacts to Swainson's hawk are not anticipated. Indirect effects from the loss of approximately 3 potential nesting trees within the BSA will be mitigated by purchasing riparian mitigation credits as described in measure BIO-10. Additional compensatory mitigation is not required.

### **Central Valley Steelhead**

Central Valley steelhead is listed as threatened under FESA (63 FR 13347, March 19, 1998) and is under the jurisdiction of NMFS. This distinct population segment consists of steelhead in the Sacramento and San Joaquin River basins in the Central Valley. Steelhead are anadromous fish that spend part of their life cycle in freshwater and part in salt water. The species was once abundant in California coastal and Central Valley drainages. However, population numbers have declined significantly, especially in the tributaries of the Sacramento River (NMFS 2014). The species spawns in small, freshwater streams where the young remain from one to several years before migrating to the ocean to feed and grow. Adults return to their natal streams to spawn and complete their life cycle. Juvenile steelhead typically migrate to marine waters after spending two years in cool, clear, fast-flowing permanent streams and rivers where they reside for two or three years prior to returning to their natal stream to spawn at four or five years old.

Upon entering freshwater, the species holds until flows are high enough in tributaries to enter for spawning. Unlike Pacific salmon, steelhead are capable of spawning more than once before they die (NMFS 2014). Steelhead may survive a wide temperature gradient, but optimal immigration and holding temperatures are 46 degrees Fahrenheit (°F) to 52°F and optimal growing temperatures for juveniles are 59°F to 64.4°F (NMFS 2014). Furthermore, there are six primary constituent elements of Critical Habitat for steelhead including: freshwater spawning sites, freshwater rearing sites, freshwater migration corridors, estuarine areas, nearshore marine areas, and offshore marine areas. The Project area provides a freshwater migration corridor for adults or juveniles between freshwater spawning and rearing sites higher in the watershed and estuarine and marine habitats in the San Francisco Bay and Pacific Ocean.

### *Steelhead Survey Results*

Within the Calaveras River Watershed, anadromous steelhead are restricted to areas downstream of the New Hogan Dam. The lower Calaveras River Watershed is broken into four main segments including the Calaveras River, the Old Calaveras River (Riverine), the Mormon Slough, and the Stockton Diverting Canal. From the New Hogan Dam, the Calaveras River flows approximately 15 miles before the channel is split between the Mormon Slough and the Old Calaveras River (Riverine) by the Bellota Weir, operated by the SEWD. From the Bellota Weir, the Old Calaveras River (Riverine) flows northwest emptying into the San Joaquin River on the north side of Stockton while the Mormon Slough flows southwest before emptying into the Stockton Diverting Canal which feeds back into the Old Calaveras River (Riverine) approximately 5.6 miles upstream of its confluence with the San Joaquin River.

The Calaveras River between the New Hogan Dam and the Bellota Weir provide potentially suitable spawning habitat for steelhead and this reach does support a small run most years; however, in order to access this reach, a majority of migrating steelhead utilize the Mormon Slough since flows within the Old Calaveras River (Riverine) are typically lower and more obstructed during the fall and winter steelhead runs when the Bellota Weir is open and most of the outflow from the New Hogan Dam is directed into the Mormon Slough (Stillwater Sciences 2004). In addition, the Calaveras River Fish Migration Barriers Assessment Report prepared by the California Department of Water Resources in 2007 found that numerous barriers to anadromous migration exist in the Old Calaveras River (Riverine) (CDWR 2007).

Within the BSA, Old Calaveras River (Riverine) provides marginal migration habitat for the species; however, numerous obstructions and low flows during the species migration season reduce the likelihood that the species will be present within the BSA. Potential presence of the species cannot be completely discounted due to presence of suitable upstream spawning habitat and documented occurrences of the species within the watershed. The species is therefore considered to have a low to moderate potential of occurring within the BSA.

#### Critical Habitat

Within the BSA, the Old Calaveras River (Riverine) is final designated Critical Habitat for steelhead.

#### *Project Impacts to Steelhead*

Due to construction occurring during the spring and summer months outside of the species' migration season, the Project is extremely unlikely to result in direct impacts to individual steelhead. However, the Project will result in both temporary and permanent impacts to final designated Critical Habitat for the species. Temporary impacts would be limited to temporary ground disturbance within the channel due to construction activities. Permanent impacts would be limited to the placement of a single pier and two abutments within the channel. The Project will have approximately 0.074 acres of temporary impacts and approximately 0.015 acres of permanent impacts to Old Calaveras River (Riverine). Additionally, riparian vegetation is a key component of steelhead habitat, providing bank stabilization and maintaining cooler water temperatures. The Project will result in approximately 0.184 acres of temporary impacts and approximately 0.093 acres of permanent impacts to riparian habitat.

Project activities will be restricted to low flow periods, as listed in BIO-3, when the species is less likely to be present. Additionally, construction equipment will not be operated in flowing water that could potentially result in take of the species. With implementation of the proposed avoidance and minimization measures, direct impacts to the species are not anticipated. A biological assessment (BA) has been prepared, and formal consultation with NMFS was concluded on September 3, 2021, with a "would adversely affect" determination for CCV Steelhead and Critical Habitat. Measures BIO-24 through BIO-30 will be incorporated per the NMFS Biological Opinion, and any additional measures required by USFWS will be incorporated.

#### *Steelhead Avoidance and Minimization Efforts*

The Project is not anticipated to directly impact individuals of the species. Project activities would occur when the Old Calaveras River (Riverine) is dry or when flow in the channel is low, as specified in measure BIO-3. During this period, it is unlikely that the species will be present in Old Calaveras River (Riverine). When water flow is low, the steelhead habitat present within the Project area becomes less suitable and more difficult for individuals to migrate. The Project has been designed to minimize temporary and permanent impacts to riverine and riparian habitat. In addition to measures BIO-1 through BIO-10 and measures BIO-12 and BIO-13, measures BIO-24 through BIO-30 will be implemented.

#### *Compensatory Mitigation for Steelhead*

Compensatory mitigation is proposed specifically for CCV Steelhead or Critical Habitat with the implementation of measures BIO-24 through BIO-30; temporary and permanent impacts to riverine and riparian habitat will be mitigated for at appropriate ratios determined by permitting agencies, as listed in BIO-27. In addition, potential effects to steelhead would be further minimized or avoided through the implementation of measures BIO-1 through BIO-10.

### **Valley Elderberry Longhorn Beetle**

The valley elderberry longhorn beetle (VELB) is federally listed as threatened. The beetle goes through four life stages (egg, larva, pupa, and adult) (USFWS 2017). The adults are active from March to June. The VELB requires elderberry shrubs within riparian habitat as a host plant. VELB's usage of elderberry shrubs can be detected by the presence of exit holes created by the beetle's larval stage in the stem of the shrubs. The VELB is threatened by habitat loss of California's Central Valley riparian areas, which is occurring due to agriculture and urban development.

#### *Valley Elderberry Longhorn Beetle Survey Results*

The Calaveras River riparian corridor provides suitable habitat for VELB. During the March 2017 surveys, 37 elderberry shrubs were identified and mapped along the riparian corridor. Since this survey, vegetation has been removed from the riparian corridor by the respective property owner. During the June 2019 biological surveys, approximately 24 elderberry shrubs were identified and mapped, including one exhibiting potential VELB exit holes. Surveys were only conducted on the south side of Calaveras River due to restricted access on the north side. Binoculars were used to scan vegetation on the north side of the Project area and no elderberry shrubs were observed. The nearest historic occurrence of the beetle was approximately 1.4 miles upstream of the BSA along the Calaveras River. Due to the presence of elderberry shrubs within suitable habitat and range, the identification of exit holes, and the local, historic occurrence of the species on the Calaveras River, the VELB is considered to have a high potential of occurring within the BSA.

#### *Project Impacts to Valley Elderberry Longhorn Beetle*

The Project requires removal of the existing bridge and construction of a new 75-foot bridge approximately 250-300 feet east of the existing bridge. This location of the new bridge is where many of the elderberry shrubs were observed during the June 2019 biological survey. Removal of the existing bridge will require removal and transplantation of one elderberry shrub and the construction of the new bridge will require removal and transplantation of three elderberry shrubs, which are located in the temporary impact area. Elderberry shrubs will be transplanted to a USFWS approved mitigation bank and will occur between December 15<sup>th</sup> and February 15<sup>th</sup>, as stated in measure BIO-14. All other elderberry shrubs, approximately 20 shrubs, within the Project limits will be protected in place with the use of Environmentally Sensitive Area (ESA) fencing and sheeting, as stated in avoidance and minimization measure BIO-16 (Figure 5). Impacts to VELB habitat include approximately 0.184 acres of temporary impacts and approximately 0.093 acres of permanent impacts. The removal of elderberry shrubs will directly impact a population of VELB within the BSA by removing one shrub and permanently or temporarily disturbing potentially suitable habitat; as a result, avoidance, minimization, and mitigation measures will be incorporated into the Project.

A BA was prepared for the species, initiating formal consultation under a "not likely to adversely affect" determination. A biological opinion was received from USFWS on May 18, 2021. The biological opinion included no additional measures to be incorporated into the Project; the USFWS determined that the measures described in the following sections (BIO-14 through BIO-21) are sufficient to minimize effects to the species.

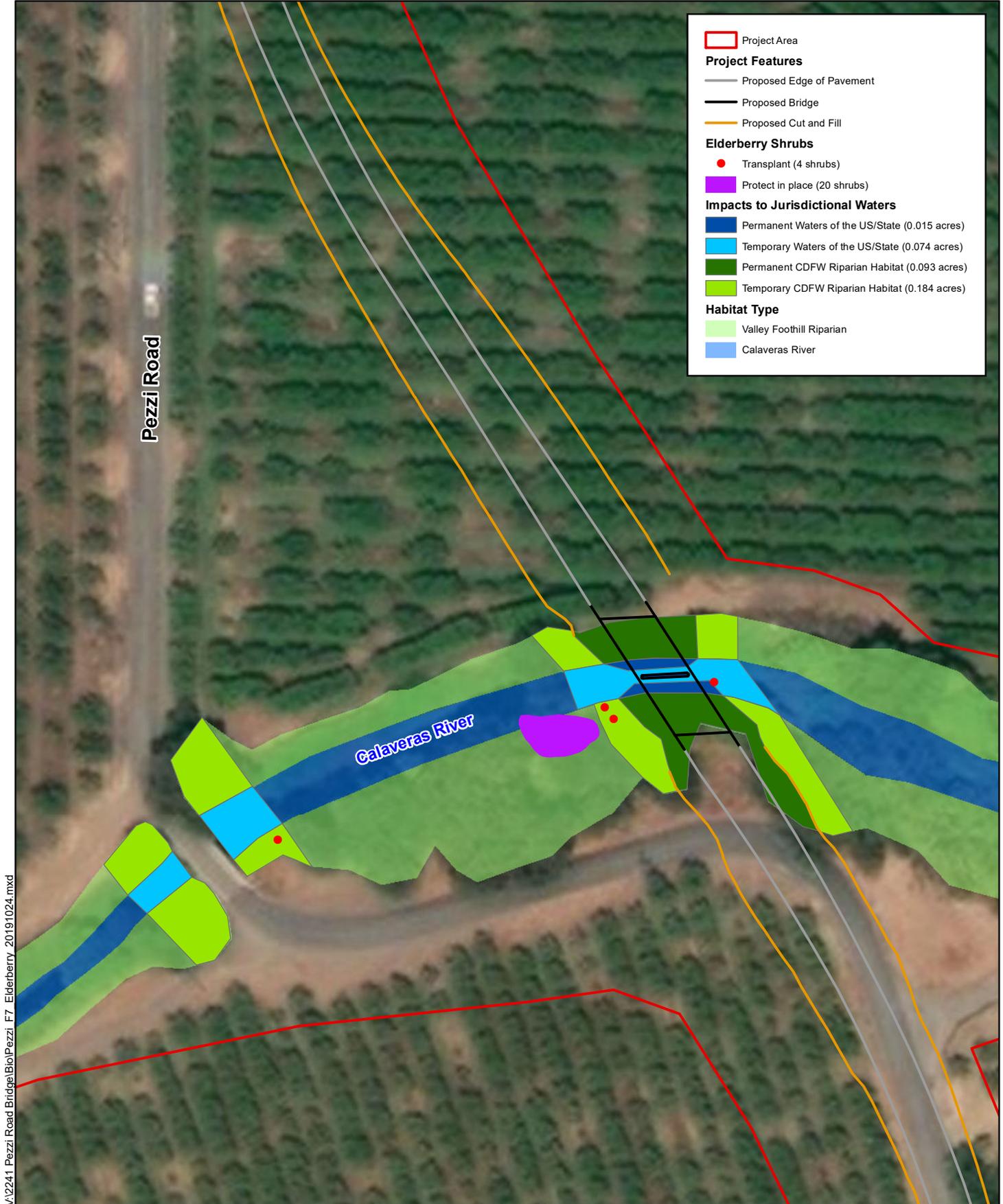
#### *Valley Elderberry Longhorn Beetle Avoidance and Minimization Efforts*

In addition to measures BIO-1 and BIO-10, the avoidance and minimization measures BIO-14 through BIO-20 shall be implemented to reduce potential impacts to VELB.

#### *Compensatory Mitigation for Valley Elderberry Longhorn Beetle*

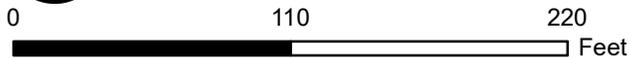
Compensatory mitigation for permanent impacts to VELB habitat is proposed in BIO-21 based on the Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS

2017). Direct impacts from the loss of one elderberry shrub and approximately 0.093 acres of riparian habitat will be mitigated through the purchase of 6.7 credits at an approved USFWS mitigation bank (Table 5). In addition, the directly impacted elderberry shrub will be relocated to a USFWS approved location as described in measure BIO-14.



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Source: ESRI World Street Maps Online; Dokken Engineering 2/13/2020; Created By: hsheldon



**FIGURE 5**  
**Elderberry Shrub Locations and Impacts to Waters**  
 Federal Project: BRLO 5929(240)  
 Pezzi Road Bridge Replacement over Calaveras River  
 San Joaquin County, California

**Table 5: Impacts to VELB Habitat**

Type of Impact	Amount of Impact	Compensation Ratio	Mitigation Requirement	Credit Purchase <sup>2</sup>	Total Credit Purchase
Riparian Habitat	0.093 acres	3:1	12,154 ft <sup>2</sup> (0.279 acres)	6.7 credits (12,154/1,800)	<b>6.7 credits</b>

<sup>1</sup>acre(s) of credits: acre(s) of disturbance

<sup>2</sup>One credit (unit) = 1,800 square feet

### **Migratory Birds**

Birds protected by the MBTA and CFG Code Section 3513 are known to utilize the BSA as nesting habitat. The underside of the existing bridge could support nesting cliff swallows (*Petrochelidon pyrrhonota*), and many individuals were observed in the BSA during the June 2019 biological survey. Measure BIO-11 shall be implemented to identify and protect nesting birds present in areas surrounding the bridge. Avoidance and minimization measure BIO-22 shall be implemented to prevent swallows from establishing a nesting colony on the bridge that will be removed during the Project.

### **Small Terrestrial Wildlife**

Small terrestrial wildlife includes commonly occurring small mammals, amphibians, and reptiles. In order to minimize potential long-term effects on small terrestrial wildlife, measure BIO-23 shall be implemented.

With regards to the Project's effects on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW, USFWS, or National Oceanic and Atmospheric Administration (NOAA) Fisheries, the implementation of measures BIO-1 through BIO-26 will result in the Project having less than significant impacts.

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

**Less Than Significant Impact with Mitigation.** The following is a discussion on riparian habitat and other sensitive natural communities within Project area, potential impacts, and avoidance, minimization, and mitigation measures that when incorporated will reduce impacts to a less than significant impact.

### **San Joaquin River Riparian Corridor**

The Calaveras River is located within a valley foothill riparian corridor. Riparian vegetation extends onto both sides and into the channel. Approximately 95% of historic riparian vegetation in the Central Valley has been lost over the last 150 years (CRP 2003), predominantly to agriculture and urban development.

#### *Survey Results*

The valley foothill riparian vegetation along both banks of the Calaveras River are comprised of valley oak, boxelder, and elderberry species with dense patches of Himalayan blackberry and blessed milk thistle. These areas are not waters of the U.S. but are within CDFW jurisdiction. A total of 1.57 acres of montane riparian vegetation was mapped within the BSA.

#### *Project Impacts*

Construction access and staging is anticipated to temporarily disturb approximately 0.184 acres of the Calaveras River riparian corridor and require the removal of approximately 25 riparian trees (Figure 5). The Project would require the permanent removal of approximately 0.093 acres of

riparian habitat surrounding the river channel, involving the removal of four elderberry shrubs, Himalayan blackberry, and blessed milk thistle.

To offset temporary disturbance of 0.184 acres of riparian vegetation and the removal of 25 riparian trees, measures BIO-7 through BIO-10 shall be implemented. These measures will restore the construction area to pre-construction or better conditions through re-grading, hydroseeding and replanting of riparian species. With the implementation of the measures listed above, the Project will have a less than significant impact.

- 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?*

**Less than Significant Impact with Mitigation.** The Calaveras River was the only surface waterbody identified within the BSA. All parts of the main channel below the ordinary high water mark (OHWM) are under the jurisdiction of USACE under §10 of the Rivers and Harbors Act and §404 of the CWA and under the jurisdiction of the Central Valley RWQCB under §401 of the CWA. In addition, the main channel and associated floodplain are under the jurisdiction of CDFW under CFG Code §1600.

### **Discussion of the Calaveras River Channel**

The Calaveras River is a relatively small low elevation drainage within the San Joaquin River watershed. Flow within the Calaveras River is regulated by New Hogan Dam approximately 23 miles northeast of the BSA. From the New Hogan Dam, the Calaveras River flows approximately 15 miles before the channel is split between the Mormon Slough and the Old Calaveras River (Riverine) by the Bellota Weir, operated by the SEWD. From the Bellota Weir, the Old Calaveras River (Riverine) flows north west emptying into the San Joaquin River on the north side of Stockton while the Mormon Slough flows southwest before emptying into the Stockton Diverting Canal. The San Joaquin River continues to flow northwest into the Sacramento-San Joaquin River Delta before outflowing into Suisun Bay and ultimately the Pacific Ocean.

### *Survey Results*

The BSA contains a section of the Old Calaveras River (Riverine) approximately 14 miles downstream of the Bellota Weir. A jurisdictional delineation was conducted on March 28, 2017 and on June 27, 2019 by Dokken Engineering biologist Scott Salembier (Figure 5). Delineation of the channel followed the Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008). Within the BSA, the Old Calaveras River (Riverine) has been channelized and primarily functions as an irrigation and drainage canal for the surrounding orchards. The channel is moderately entrenched with densely vegetated banks. The channel measured approximately 20 feet wide at the OHWM. Flow regime is controlled by SEWD for irrigation supply and the channel is typically dry during the non-irrigation season (October – March) (Figure 4).

### *Project Impacts*

Removal of the existing bridge and construction of the new bridge will result in both temporary and permanent impacts to the Old Calaveras River (Riverine). Removal of the existing bridge including removal of the existing bridge abutments and shallow spread footings within the river will result in temporary disturbance of approximately 0.04 acres of the Old Calaveras River (Riverine) stream channel and will restore approximately 0.01 acres of stream channel.

Construction of the new bridge will result in temporary disturbance of 0.03 acres and permanent impacts to approximately 0.015 acres of the Old Calaveras River (Riverine) Channel (Riverine).

Construction of the Project will involve dewatering around the two bridge locations for construction access in the channel. A water diversion will be placed around the two bridge locations to temporarily redirect water flows during construction. This diversion is anticipated to cause temporary impacts to river habitat. Temporary and permanent impacts to riverine and riparian habitat will be mitigated for at appropriate ratios determined by permitting agencies.

Avoidance and minimization measures BIO-1 through BIO-6 and BIO-10 shall be implemented to reduce long term effects on the river channel and reduce the risk of accidental chemical spills that may affect downstream water quality. In addition to the avoidance and minimization measures stated here, additional protective measures will be included in the regulatory permits from USACE, Central Valley Flood Protection Board (CVFPB), Central Valley RWQCB, and CDFW that will be obtained prior to the start of construction. Therefore, this impact is less than significant with mitigation.

- 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?*

**Less than Significant Impact.** The Calaveras River corridor serves as an east-west movement corridor for terrestrial wildlife through an otherwise developed portion of the San Joaquin Valley. Under existing conditions, Pezzi Road runs north-south over the river corridor bisecting habitat with an elevated 2-lane roadway. The Pezzi Road bridge provides an undercrossing approximately 600 feet wide for terrestrial wildlife.

The Project is not anticipated to have any effects to the habitat connectivity for birds, fish, or small and medium terrestrial wildlife. The Project will not reduce habitat connectivity for large terrestrial wildlife, such as black-tailed deer, moving along the San Joaquin River corridor. No loss of habitat connectivity is anticipated; therefore, impacts are considered less than significant.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**No Impact.** There are no local policies or ordinances that protect biological resources in San Joaquin County; therefore, the Project will have not conflict with any local policies or ordinances.

- f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

**No Impact.** There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans within the Project area; therefore, the Project will not conflict with any Habitat Conservation Plan.

#### **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

**BIO-1:** All construction personnel shall be provided with environmental awareness training prior to being allowed to work on the job site. The training shall include an overview of sensitive habitats and special-status species that are present within or adjacent to the Project area and Project specific protective measures that must be adhered to. The training will also include a description of the legal penalties for violating protective measures.

**BIO-2:** Contract specifications will include the following BMPs, where applicable, to reduce erosion during construction:

- Implementation of the Project will require approval of a site-specific Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) that

would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

- Existing vegetation will be protected in place where feasible to provide an effective form of erosion and sediment control.
- Stabilizing materials will be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities.

**BIO-3:** In channel work shall be limited to periods of low flow. If water is present within the channel during construction, a water diversion will be implemented. The water diversion will be designed and implemented by the contractor selected for this Project.

**BIO-4:** Refueling or maintenance of equipment shall not be permitted within the Old Calaveras River (Riverine) and must occur at least 25 feet from the top of bank. All onsite refueling and maintenance must occur over plastic sheeting, drip pans, or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).

**BIO-5:** A chemical spill kit must be kept onsite at all times during work and must be easily accessible for use in the event of a spill.

**BIO-6:** Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or the Old Calaveras River (Riverine). Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).

**BIO-7:** The Calaveras River riparian corridor shall be established as an ESA. Prior to ground disturbance, the Project limits adjacent to riparian vegetation shall be marked off with high visibility orange fencing (ESA Fencing) to prevent further encroachment into the ESA. Construction equipment, materials, and personnel shall not be permitted beyond the ESA fencing.

**BIO-8:** Native tree removal shall be limited to the minimum amount necessary for equipment access through the Project area. Trees shall be preferentially trimmed rather than removed and trimming should not exceed 30% of the total canopy of each tree.

**BIO-9:** Following construction, the Project area shall be re-graded to pre-construction or better conditions and hydroseeded with a mix of regionally appropriate native species approved by the Project biologist.

**BIO-10:** The County will purchase mitigation bank credits from a CDFW approved mitigation bank. The County anticipates purchasing credits at a 3:1 ratio for permanent impacts and at a 1:1 ratio for temporary impacts but final mitigation ratios and credits will be determined in coordination with CDFW through the 1602 permitting process, and through the USACE/RWQCB during the 404/401 permitting process.

**BIO-11:** Prior to vegetation removal or initial ground disturbance during the nesting bird season (February 1<sup>st</sup> – September 30<sup>th</sup>) a pre-construction nesting bird survey must be conducted by a Project biologist prior to the start of work. The nesting bird survey must include the Project area plus a 300-foot buffer. Within 2 weeks of the nesting bird survey,

all areas surveyed by the biologist must be cleared by the contractor or a supplemental nesting bird survey is required.

A minimum 300-foot no work buffer will be established around any active nests of a raptor species. A 100-foot no work buffer will be established around any active nests for other migratory birds. If an active nest is discovered during construction, the contractor must immediately stop work in the nesting area until the appropriate buffer is established. If a Swainson's hawk nest is observed during the pre-construction survey, a 600-foot buffer will be established and CDFW will be contacted for further guidance. The contractor is prohibited from conducting work that could disturb the birds (as determined by a Project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by a Project biologist and approved by CDFW.

- BIO-12:** If water is present at the start of in channel work, prior to installing the water diversion, the Project biologist(s) will remove fish from the work area. This may be accomplished by dip netting or seine netting as determined by the Project biologist(s). Handling of salmonids is not anticipated; however, if this action is necessary, the County will contact Caltrans in coordination with NMFS and consultation may need to be re-initiated.
- BIO-13:** Silt fences and fiber rolls should be utilized to reduce potential sediment discharge that could impact water quality.
- BIO-14:** Prior to initiating construction, elderberry shrubs that cannot be avoided will be removed and transplanted to a USFWS approved mitigation bank. Relocation must be completed between December 15<sup>th</sup> and February 15<sup>th</sup> when elderberry shrubs are dormant to minimize transplant stress on the shrubs. Transplanting methods must follow the recommendations included in Section 5.2 of the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017) or more recent published USFWS recommendations. The Project biologist will be present onsite during shrub relocation.
- BIO-15:** Prior to construction, during transplantation of elderberry shrubs, the Project biologist will conduct a survey of the Project area to ensure that no new shrubs, with stems 1 inch or greater, have appeared since the original survey. If new shrubs, with stems 1 inch or greater, are discovered that may be impacted by the Project coordination with USFWS will occur.
- BIO-16:** Elderberry shrubs adjacent to the Project limits will be protected in place. ESA fencing will be placed around the dripline of elderberry shrubs and protective sheeting will be used to block construction dust and debris.
- BIO-17:** A qualified biologist will be present onsite for any elderberry shrub removal and will periodically inspect the construction area and ESA fencing to ensure that no unauthorized take of VELB occurs.
- BIO-18:** Signs will be installed along the edge of the ESA and will read the following: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.

- BIO-19:** Herbicides, insecticides, fertilizers, or other chemicals that might harm the VELB or VELB's host plant will not be used within 100 feet of elderberry shrubs. All chemicals will be applied using a backpack sprayer or a similar direct application method.
- BIO-20:** To prevent fugitive dust from drifting into adjacent habitat, all clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, demolition activities, or other dust generating activities will be effectively controlled for fugitive dust emissions utilizing application of water or by presoaking.
- BIO-21:** Prior to the start of construction, the County will purchase 6.7 mitigation credits for VELB from a USFWS approved mitigation bank.
- BIO-22:** If demolition of the existing bridge is planned to occur during the swallow nesting season, measures must be taken to avoid impacts to migratory swallows. To protect migratory swallows, unoccupied nests must be removed from the existing bridge and swallow exclusions must be installed prior to the nesting season (February 15<sup>th</sup> – September 30<sup>th</sup>). Swallow exclusion design is at the discretion of the contractor but may consist of netting, sheeting, or low friction coatings. If a swallow is allowed to complete a nest on the existing bridge, work may not resume on the bridge without written approval from CDFW or until the Project biologist has determined that the young have fledged, and the nest is empty.
- BIO-23:** Erosion control materials that incorporate plastic monofilament netting are not permitted within the Project area.

The following measures were recommended by NMFS to avoid, minimize, mitigate, or otherwise offset the impact of the proposed action on critical habitat.

- BIO-24:** In coordination with NMFS, if a temporary water diversion is determined to be needed, then Caltrans shall develop a plan that describes: (1) how a temporary diversion structure will be installed, and uninstalled, in the action area within the Old Calaveras River channel, including any relevant designs; (2) how dewatering will occur in the work area; (3) protocols for how, and where, fish will be relocated, including conservation measures that would reduce the potential for fish injury and mortality; and (4) communication protocols for how to notify NMFS in the event that a temporary diversion structure needs to be installed, and dewatering and fish relocation activities need to occur. Caltrans shall submit the plan to NMFS for review and approval a minimum of 30 days prior to installation of a temporary diversion structure within the Old Calaveras River channel.
- BIO-25:** Caltrans shall notify NMFS within 24 hours if CCV steelhead are observed, encountered, or relocated during fish relocation activities.
- BIO-26:** If a temporary diversion structure is installed and fish relocation activities occur, then within 60 days after completion of fish relocation activities and removal of the temporary diversion structure, Caltrans shall submit a report to NMFS that describes and summarizes fish relocation activities. This report shall include a description of the conservation measures that were implemented to reduce the potential for fish injury and mortality, and summarize all the fish species that were observed, encountered, and relocated.

- BIO-27:** San Joaquin County will purchase credits from approved banks for impacts to riparian habitat at a 3:1 ratio for permanent impacts, and a 1:1 ratio for temporary impacts. Potential banks include Bullock Bend Mitigation Bank and Fremont Landing Conservation Bank.
- BIO-28:** Caltrans should protect existing, and wherever practicable, establish new riparian vegetation to enhance shading, cover, terrestrial food supply, and supply of instream woody material.
- BIO-29:** Caltrans should require contractors to use biodegradable lubricants and hydraulic fluid in construction machinery entering the Old Calaveras River channel. The use of petroleum alternative can greatly reduce the risk of contaminants from entering the aquatic ecosystem.
- BIO-30:** Bank erosion control should use vegetation methods or “soft” approaches (such as vegetative plantings and placement of woody material) to shoreline modifications whenever feasible. Hard bank protection should be a last resort and the following options should be explored: tree revetments, stream flow deflectors, and vegetative riprap.

#### ***FINDINGS***

The Project would have **Less Than Significant Impacts with Mitigation** relating to biological resources.

## 2.5 CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §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 §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"/>

### REGULATORY SETTING

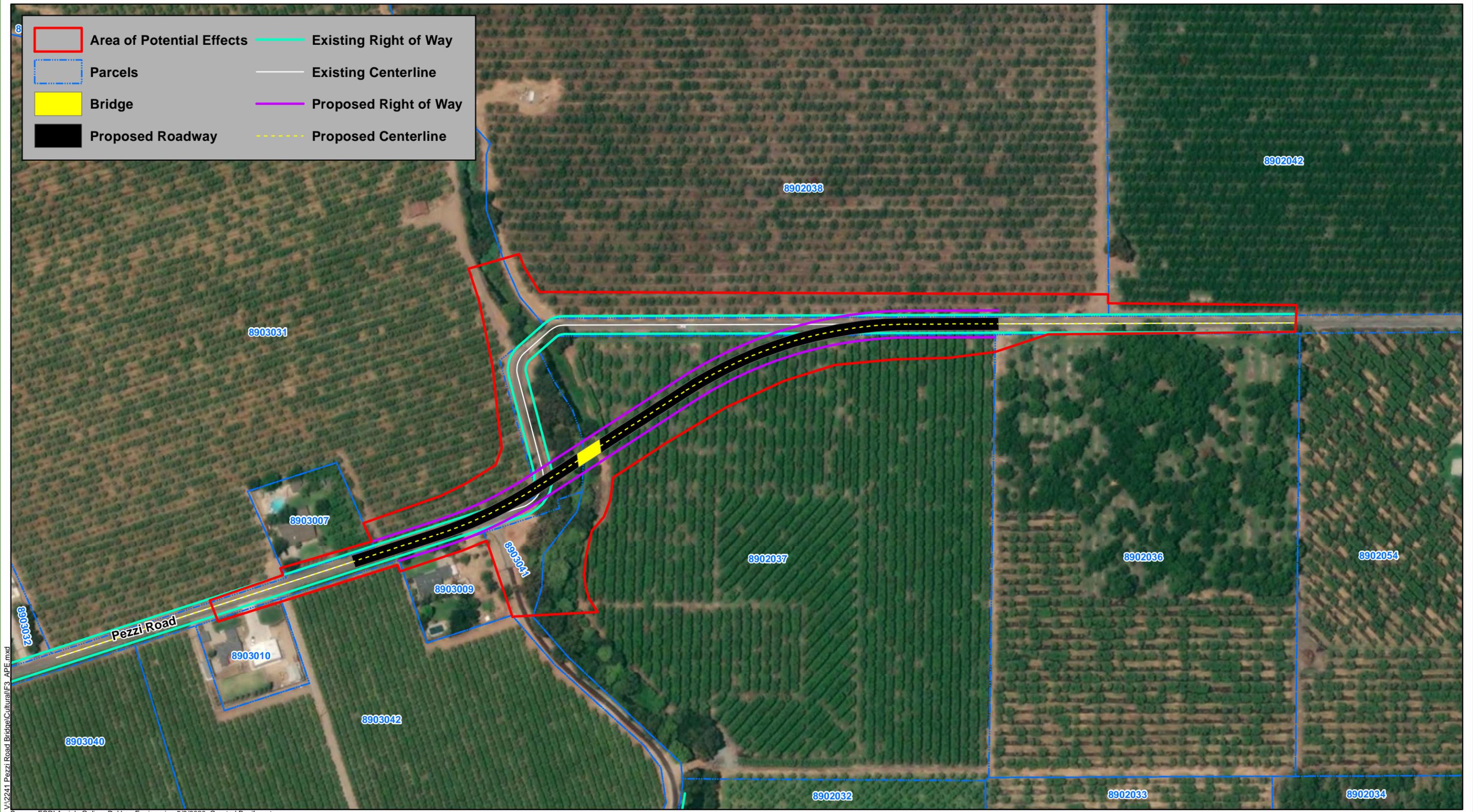
CEQA established statutory requirements for establishing the significance of historical resources in PRC Section 21084.1. The CEQA Guidelines (Section 10564.5[c]) also require consideration of potential Project impacts to "unique" archaeological sites that do not qualify as historical resources. The statutory requirements for unique archaeological sites that do not qualify as historical resources are established in PRC Section 21083.2. These two PRC sections operate independently to ensure that significant potential effects on historical and archaeological resources are considered as part of a Project's environmental analysis. Historical resources, as defined in Section 15064.5 as defined in the CEQA regulations, include 1) cultural resources listed in or eligible for listing in the California Register of Historical Resources (California Register); 2) cultural resources included in a local register of historical resources; 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in one of several historic themes important to California history and development. Under CEQA, a Project may have a significant effect on the environment if the Project could result in a substantial adverse change in the significance of a historical resource, meaning the physical demolition, destruction, relocation, or alteration of the resource would be materially impaired. This would include any action that would demolish or adversely alter the physical characteristics of an historical resource that convey its historic significance and qualify it for inclusion in the California Register or in a local register or survey that meets the requirements of PRC Section 5020.1(l) and 5024.1(g). PRC Section 5024 also requires state agencies to identify and protect state-owned resources that meet National Register of Historic Place (National Register) listing criteria. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocation, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks. CEQA and the CEQA Guidelines also recommend provisions be made for the accidental discovery of archaeological sites, historical resources, or Native American human remains during construction (PRC Section 21083.2(i) CCR Section 15064.5[d and f]).

### AFFECTED ENVIRONMENT

An Area of Potential Effects (APE) was established as the area of direct and indirect effects which encompasses an approximately 34.1-acre area. This includes all staging areas, street closures, vegetation/tree removal, approach roadway realignment, bridge replacement, ground disturbance, temporary construction easements, and utility relocation. The APE extends along Pezzi Road approximately 1,200 feet to the north and south of the Calaveras River (Figure 6).

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	Area of Potential Effects		Existing Right of Way
	Parcels		Existing Centerline
	Bridge		Proposed Right of Way
	Proposed Roadway		Proposed Centerline



VA2241 Pezzi Road Bridge Cultural\F3\_APE.mxd

Source: ESRI Aerials Online; Dokken Engineering 5/8/2020; Created By: jfogerty



1 inch = 200 feet

0      200      400      600      800      1,000

Feet

**FIGURE 6**  
**Area of Potential Effects**  
 Federal Project: BRL0 5929(240)  
 Pezzi Road Bridge Replacement Project  
 San Joaquin County, California



The vertical APE consists of a maximum of 2 feet of depth below existing ground surface to accommodate earthwork for the construction of the roadway and required for all roadway approach realignment, vegetation removal, and fill compaction. Bridge abutments will require an excavation depth of 8 feet below existing ground surface, plus an additional 55 feet (for a total of approximately 70 feet) below existing ground surface to accommodate piles driven into the ground. Underground utilities may require relocation, and all relocation will occur within 5 feet below ground surface.

Efforts to identify potential cultural resources in the APE included background research, a search of previously recorded archaeological site records and cultural resource identification reports on file at the California Historical Resources Information System Central California Information Center (CCIC), consultation with the Native American Heritage Commission (NAHC), and a pedestrian ground surface survey.

Archaeologist Dr. Brian S. Marks conducted an archaeological field survey of the APE on March 28, 2017. The pedestrian survey was conducted at roughly 10-meter transect intervals. All Project area conditions and cultural resources were fully recorded in the field notes. Coverage varied in areas with vegetation coverage.

Exposed subsurface cuts, such as the banks within Calaveras River, roadway cuts, and bank cuts were observed for the presence of archaeological resources, soil color change, and/or staining that could indicate past human activity or buried deposits. The property north of the river and east of Pezzi Road could not be surveyed due to lack of permission to access the property (APN 08902037). An inspection of the property from the road and from the dry riverbed saw that the ground surface was bare ground beneath an orchard of almond trees with the rows of grass. By comparing this property with the surrounding area and examining historic aerial photographs, it is unlikely that a pedestrian inspection of this property would have revealed any cultural resources. Additionally, with the planting and removal of trees, the upper 5 feet of the surface soil would be heavily disturbed and the probability of finding intact buried deposits in this area is low. Therefore, the pedestrian survey conducted on March 28, 2017 did not reveal any archaeological resources.

## **DISCUSSION**

- a) *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

**No Impact.** Dokken Engineering obtained a record search (File #10217L) for the Project area and a one-mile radius surrounding the Project area from the CCIC, California State University, Stanislaus on March 15, 2017. The record search was conducted by Robin Hards, Assistant Research Technician from the Information Center. The search examined the Office of Historic Preservation (OHP) Historic Properties Directory, OHP Determinations of Eligibility, *California Inventory of Historical Resources*, Historical Literature and Maps, Caltrans Bridge Inventory, GLO and/or Rancho Plat Maps, Local Inventories, and Soil Survey Maps. The record search disclosed eleven cultural resources within the one-mile record search boundary, but no resources within the APE. As there are no cultural resources documented or encountered within the Project area, the Project would have no impact on historical resources as defined in §15064.5.

- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

**Less than Significant with Mitigation.** In an effort to identify archaeological resources that might be affected by the undertaking, a pedestrian survey, background research, and consultation with individuals and organizations were conducted. A record search conducted at the CCIC identified

eleven cultural resources within a one-mile radius of the APE and no resources within the APE. The pedestrian survey did not observe any cultural resources within the APE.

On February 22, 2019, Dokken Engineering sent a letter and a map depicting the Project vicinity to the NAHC in West Sacramento, asking the commission to review the sacred land files for any Native American cultural resources that might be affected by the Project. The request to the NAHC seeks to identify any Native American cultural resources within or adjacent to the Project area. On March 22, 2019, Katy Sanchez, Staff Services Analyst, informed Dokken Engineering that a review of the sacred lands was completed and returned negative results.

On December 17, 2019, Section 106 consultation letters were sent by mail to the seven Native American individuals on the list provided by the NAHC. These letters were also sent digitally via email to those with emails provided by the NAHC. The letters provided a summary of the Project and requested information regarding comments or concerns the Native American community might have about the Project. For those individuals that did not reply to the letter, follow-up emails were sent on January 29, 2020 to those individuals with email contact. Follow-up phone calls were placed to all non-responders on January 29, 2020. The following discussion presents a summary of consultation efforts for each individual on the list provided by the NAHC.

*Rhonda Morningstar-Pope, Chairperson, Buena Vista Rancheria of Me-Wuk Indians.* A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. On January 15, 2020, an email response from Richard Hawkins of the Buena Vista Rancheria stated that the tribe has no concerns about the Project but would like to be notified if any cultural resources are discovered during construction.

*California Valley Miwok Tribe.* A letter was mailed on December 17, 2019. As there was no email address, a phone call was placed on January 29, 2020. There was no answer and no option to leave a voice mail was available. An email was sent on March 5, 2020 with a digital copy of the notification letter attached. No response has been received to date.

*California Valley Miwok Tribe AKA Sheep Rancheria of Me-Wuk Indians of CA.* A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. A follow up email with a digital copy of the letter attached was sent on January 29, 2020 and March 5, 2020. No response has been received to date.

*Sara Dutschke Sethchwaelo, Chairperson, Lone Band of Miwok Indians.* A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. A follow up email with a digital copy of the letter attached was sent on January 29, 2020 and March 5, 2020. No response has been received to date.

*Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe.* A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. A follow up email with a digital copy of the letter attached was sent on January 29, 2020. Chairperson Perez responded via email that although the pedestrian survey, record search, and sacred lands file search did not identify any Native American resources within the Project area, there is still potential to encounter such resources. She requested consultation and a site visit. A site visit was set for June 5, 2020. A field meeting was held with Kathy Erolinda Perez, Erolinda Perez, Joan Faustorilla (County Project Engineer), and Amy Dunay (Dokken Engineering archaeologist). Project details and cultural resource identification efforts to date were discussed. Ms. Kathy Perez noted that burials and other Native American cultural resources have been found within several miles of the Project area and that in general, she is concerned about buried resources. She recommended Native American awareness training be provided to construction staff and that

Native American monitoring also occur during construction, including any removal of trees. She provided more comprehensive measures in an email following the meeting. These recommended measures are included in measures CR-1 through CR-2. Worker Environmental Training will be provided during construction and Caltrans standard guidelines and protocols regarding inadvertent discoveries will be followed should any cultural resources be identified during construction.

Gene Whitehouse, Chairperson, United Auburn Indian Community of the Auburn Rancheria. A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. An email was received on December 26, 2019 from Anna Starkey, Cultural Regulatory Specialist for the United Auburn Indian Community (UAIC), stating that they have no knowledge of resources within the Project area. The UAIC requested copies of the cultural documents, copies of the IS/MND, and that workers be provided with cultural awareness training. A response was sent on December 30, 2019 stating that the UAIC will be sent a copy of the Historic Property Survey Report (HPSR), once available. A second email was received on January 14, 2020 with a letter attached from Chairman Whitehouse requesting consultation under AB52. The letter and email also requested copies of the record search, cultural documents, and a site visit. The record search results were sent to Ms. Starkey on January 27, 2020 and requested available dates for site visit. A follow up email requesting site visit availability was sent on March 5, 2020. The UAIC responded that they prefer to conduct cultural surveys in conjunction with the consulting archaeologist and inquired as to whether other tribes have engaged in consultation and have requested a site visit. A response email was sent the same day to the UAIC providing dates and times in March for a site visit and confirming that there were other tribes consulting with the County and that site visits with these tribes were being scheduled. No tribe names were provided.

A field meeting was later held with Antonio Ruiz (UAIC), Travis Young (UAIC), Joan Faustorilla (County Project Engineer), and Amy Dunay (Dokken Engineering archaeologist) on June 9, 2020. Project details and cultural resource identification efforts to date were discussed. Mr. Ruiz noted that he needed to check the UAIC's internal database for the presence of Native American cultural resources, but stated that in general, he is concerned about buried resources within the Project area. A site survey within the publicly accessible embankment of the river was conducted, but visibility was zero percent. Mr. Ruiz inquired as to whether other tribes had consulted on the Project. Upon hearing that Katherine Perez was actively consulting, he stated that the UAIC would defer to her, but would still like to review the UAIC internal database and receive copies of the records search, geotechnical report, tree survey/data, and draft cultural report to gain a better understanding of the Project area. A copy of the draft HPSR/Archaeological Survey Report (ASR), which included the records search and all current Native American consultation, was provided via email on July 6, 2020 while the Project area Geographic Information System (GIS) shapefile and draft geotechnical report were provided via email on July 8, 2020. The July 8, 2020 email also provided the tree species within the Project area and relayed that tree data (numbers, species, sizes, etc.) would not be known until the permitting phase, which would occur after the environmental document approval phase. Both July emails requested that the UAIC provide the results of their internal database search. A July 6, 2020 email from the UAIC stated that they anticipated providing the results of their internal database search, as well as recommendations for the Project, "later in the week". No email or other correspondence transmitting this information was received by the end of that week or as of the date of this document. Raymond Hitchcock, Chairperson, Wilton Rancheria. A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. Mariah Mayberry of the Wilton Rancheria responded via email on January 14, 2020 that the tribe wishes to consult on this Project. They requested copies of the cultural resources record search and wanted to be included in cultural surveys. An email was sent to Ms. Mayberry on January 20, 2020, with copies of the cultural resources record

search results and informed Ms. Mayberry that the pedestrian inspection was completed in 2017. No further response has been received to date.

At this time, no further archaeological study is recommended unless Project plans change to include areas not previously included in the APE or a greater amount of ground disturbance. With the findings of the visual survey and record search, no impacts are anticipated for the Project related to archaeological resources. With any project, there is always the possibility that unknown cultural resources may be encountered during construction. With the implementation of mitigation measure CR-1 potential impacts from the Project would be less than significant with mitigation incorporated.

c) *Disturb any human remains, including those interred outside of dedicated cemeteries?*

**Less than Significant with Mitigation.** With any project, there is always the possibility that unmarked burials may be unearthed during construction. Implementation of measure CR-2 would reduce this to a less than significant impact with mitigation incorporated.

#### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

**CR-1:** If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find and develop a plan for documentation and removal of resources if necessary. Additional archaeological survey will be needed if Project limits are extended beyond the present survey limits.

**CR-2:** Section 5097.94 of the PRC and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the county coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the NAHC within twenty-four hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.

#### ***FINDINGS***

The Project would have **Less Than Significant Impacts with Mitigation** relating to cultural resources.

## 2.6 ENERGY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?*

**No Impact.** Long-term operation of the Project would not result in the additional consumption of energy resources other than what currently occurs. During construction, the Project would comply with standard BMPs to ensure that wasteful, inefficient, or unnecessary consumption of energy resources does not occur.

- b) *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**No Impact.** The Project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No impacts to energy are anticipated; therefore, no avoidance, minimization, and/or mitigation measures are required.

### FINDINGS

The Project would have **No Impact** relating to energy.

## 2.7 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to 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 type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and Project design. Earthquakes are prime considerations in the design and retrofit of structures.

### DISCUSSION

- a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
  - i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?*
  - ii) *Strong seismic ground shaking?*
  - iii) *Seismic-related ground failure, including liquefaction?*
  - iv) *Landslides?*

**No Impact.** The Project would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides. The Project is not located within an Alquist Priolo Earthquake Fault Zone. The nearest seismic source is the Stockton Fault approximately 22 miles south of the Project site.

Landslides usually occur in locations with steep slopes and unstable soils. San Joaquin County has not yet been mapped by the Seismic Hazards Zonation Program to determine landslide potential. The majority of the Project area is situated on flat or very gently sloping topography where the potential for slope failure is minimal to low. Seismic-related failure, including liquefaction, is also a less than significant impact because the potential is believed to be slight at this predominantly flat, low-seismicity site. The Project area is located on a flat area. No impact from landslides would occur with the Project. Design and construction in accordance with Caltrans' seismic design criteria will ensure that substantial impacts due to seismic forces and displacements are avoided or minimized to the extent feasible. The Project is not on a geologic unit or soil that is unstable or that would become unstable as a result of the Project. On-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse is not anticipated.

*b) Result in substantial soil erosion or the loss of topsoil?*

**Less than Significant with Mitigation.** The NRCS Web Soil Survey was used to identify soils within the Project area. Soil units within the BSA include Archerdale clay loam, 0 to 2 percent slopes, Cognia loam, 0 to 2 percent slopes, and Stockton fine sandy loam, 0 to 2 percent slopes, overwashed (NRCS 2019). Soils within the BSA are somewhat poorly drained to well drained and have a medium runoff class (NRCS 2019). The Project will involve ground disturbance with vegetation removal within the flood plain of the Calaveras River and associated riparian areas, as well as during construction for the new alignment of Pezzi Road. Potential impacts to soils would be minimized through soil stabilization measures covered within the required General Construction MS4 Permit and implementation of the SWPPP as discussed in Section 1.5 and Section 2.10. Erosion control practices outlined in a SWPPP. In addition, measures WQ-1 through WQ-5 in Section 2.10 of this document would further reduce impacts to erosion of soil.

*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?*

**No Impact.** The Project is not located on soil that is known to be 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. Therefore, no impact would occur.

*d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

**No Impact.** The Project is not located on expansive soils that would create substantial risks to life or property. Therefore, no impact would occur.

*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?*

**No Impact.** The Project will not utilize septic tanks or an alternative waste water disposal system on the site. Therefore, no impact would occur.

*f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**No Impact.** No findings of unique paleontological resources or sites or unique geological features were identified during the record search and cursory pedestrian survey within the Project area. Therefore, no impact would occur.

***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

Measures WQ-1 through WQ-5 provided in Section 2.10 Hydrology and Water Quality would reduce potential impacts associated with soil erosion to a less than significant level.

***FINDINGS***

The Project would have **Less Than Significant Impact with Mitigation** relating to geology and soils.

## 2.8 GREENHOUSE GAS EMISSIONS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

### REGULATORY SETTING

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization’s Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), NO<sub>x</sub>, nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

On June 1, 2005, Governor Arnold Schwarzenegger signed EO S-3-05. The goal of this EO is to reduce California’s GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of AB 32, the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of GHG.” EO S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state’s Climate Action Team.

With EO S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the EPA to regulate GHG as a pollutant under the CAA (Massachusetts vs. [EPA] et al., 549 U.S. 497 (2007)). The court ruled that GHG does fit within the CAA definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.<sup>[1]</sup>

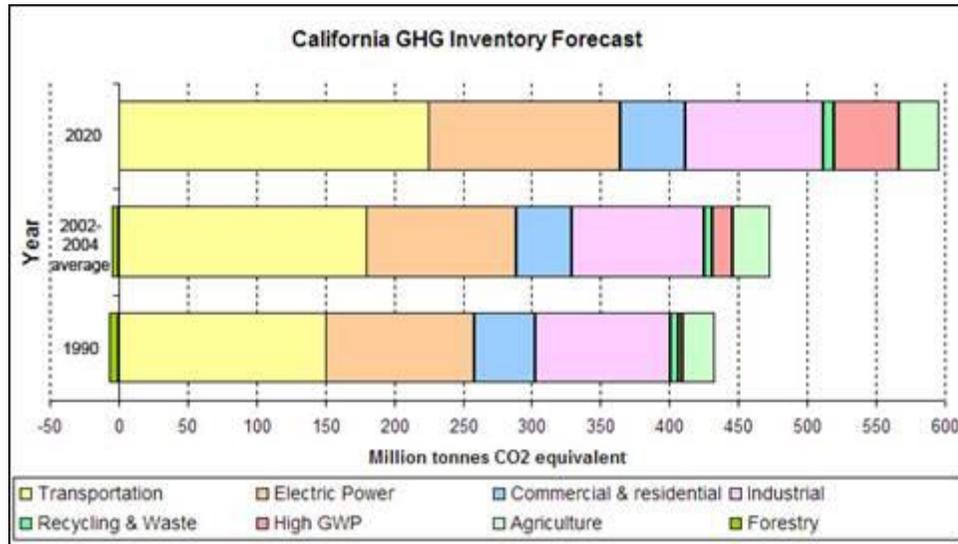
On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHG under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHG--CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>)--in the atmosphere threaten the public health and welfare of current and future generations.

<sup>[1]</sup> <http://www.epa.gov/climatechange/endangerment.html>

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHG from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA’s GHG emission standards for light-duty vehicles, which were jointly by EPA and the Department of Transportation’s National Highway Safety Administration on September 15, 2009.



**Figure 7: California Greenhouse Gas Inventory**

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable.” See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the Project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft *Climate Change Scoping Plan*, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Figure 7 is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

The Project is a bridge replacement and road realignment project and would not be increasing traffic capacity along Pezzi Road. The only additional GHG that would be created as part of this Project would occur during construction.

## **DISCUSSION**

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

**Less Than Significant with Mitigation.** GHG emissions can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. GHG emissions produced during operations are those that result from potentially increased traffic volumes or changes in automobile speeds. The Project would not result in an increase in the number of automobiles in the traffic system; therefore, operational emissions are not anticipated. The Project would result in a temporary increase of 386 tons of GHG emissions during construction activities (maximum emissions of 5,391 lbs/day during grading/excavation) (Appendix C). However, work would be short-term in duration and is not anticipated to result in significant adverse construction GHG emissions. With implementation of measures GHG-1, the emission of GHGs during construction of the proposed Project would be negligible.

- b) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

**Less than Significant Impact.** The Project involves replacing the Pezzi Road bridge and realigning the road. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emission. Therefore, impacts would be less than significant.

## **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

In addition to the Air Quality measures **AQ-1** through **AQ-3**, the following measures will also be included in the Project to further minimize the GHG emissions and potential climate change impacts from the Project:

**GHG-1:** According to the Caltrans' Standard Specification Section 14-9.02, the contractor must comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231).

## **FINDINGS**

The Project would have **Less Than Significant Impacts with Mitigation** relating to GHG emissions.

## 2.9 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use. Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during Project construction.

### AFFECTED ENVIRONMENT

This section presents results of an Initial Site Assessment (ISA) for property associated with the Project. The purpose of the ISA is to evaluate the Subject Properties for the presence of Recognized Environmental Conditions (RECs) and/or Activity and Use Limitations (AULs), which are:

REC: "...the presence or the likely presence of any hazardous substances or petroleum hydrocarbons on the (Subject Property) that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum hydrocarbons into structures or into the ground, groundwater, or surface water of the subject property."

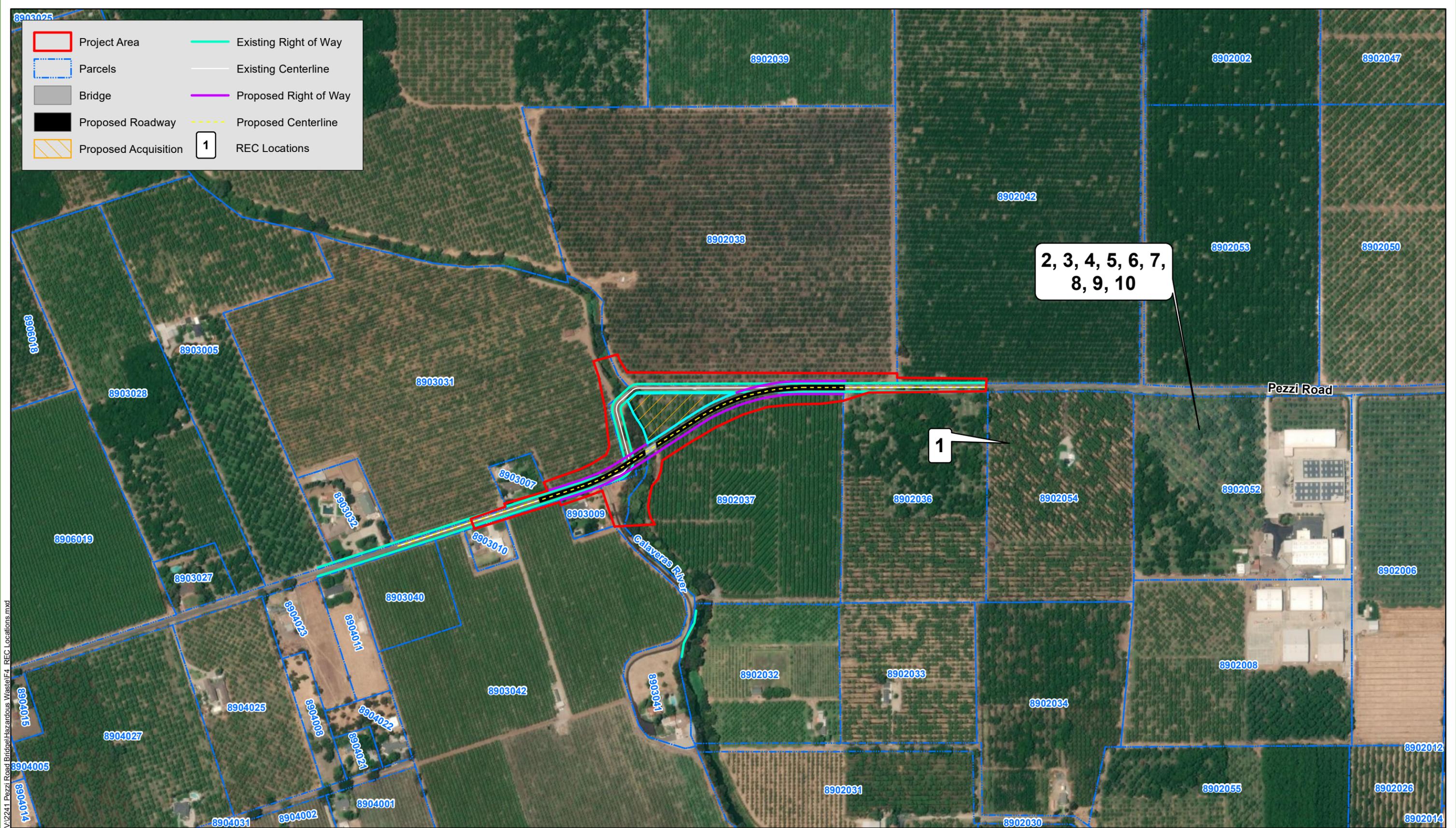
AUL: "...an explicit recognition by a federal, tribal, state, or local agency that residual levels of hazardous substances or petroleum hydrocarbons may be present on the property, and that unrestricted use of the property may not be acceptable."

The properties assessed for this ISA (Subject Properties) includes existing San Joaquin County right-of-way, and existing adjacent parcels throughout the length of the Project. This ISA was prepared in general accordance with the Caltrans ISA Guidance Document. A summary of the published lists of known hazardous substance sites was provided by Environmental Data Resources, Inc. (EDR). EDR reviewed standard federal, state, and local listings of known sites within a one-mile radius. A total of 10 RECs were identified within a one-mile radius of the Project area. The 10 RECs are presented on Table 6 and Figure 8.

**Table 6: REC or AUL Evidence**

See Figure 8 for General Location	Location	Listing Acronym	Summary	Release Information/Cleanup	Case Status
1	9760 Pezzi Road Stockton, CA 95212	CHMIRS	Mineral oil spill due to lightning strike.	Not Reported	Closed.
2 -10	Avanti Nut Company 9882 Pezzi Road 9982 Pezzi Road Stockton, CA 95212	NPDES CERS	Construction Storm Water	Not Reported	N/A
		FINDS	Oil and fuel storage.	Not Reported	N/A
		CERS	Failure to submit hazardous material information.	Not Reported	N/A
		EMI CERS	Air quality emissions.	Not Reported	N/A
		FINDS	Air Emissions	Not Reported	N/A
		NPDES	Construction Storm Water	Not Reported	N/A
		FINDS ECHO	Storage of Hazardous Waste	Not Reported	N/A
		RCRA NONGEN/NLR	Non Generator of Hazardous Waste	Not Reported	N/A
		CERS HAZ WASTE CERS	Chemical Storage Facilities	Not Reported	N/A

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V:\2241\_Pezzi Road Bridge\Hazardous Waste\F4\_REC Locations.mxd

Source: ESRI Maps Online; Dokken Engineering 12/27/2019; Created By: astorck



0 0.25 Miles

**Figure 8**  
Recognized Environmental Condition Locations

Federal Project: BRLO 5929(240)  
Road 204 Pezzi Road Bridge Replacement Project  
San Joaquin County, California



## **DISCUSSION**

- 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.** The Project would involve the use of heavy equipment for grading, hauling, and materials handling. Use of this equipment may require the use of fuels and other common materials that have hazardous properties (e.g., fuels are flammable). These materials would be used in accordance with all applicable laws and regulations and, if used properly, would not pose a hazard to people, animals, or plants. All refueling of construction vehicles and equipment would occur within the designated staging area for the Project as defined in Section 2.4 of this document, in biological measures BIO-4 through BIO-6. The use of hazardous materials would be temporary, and the Project would not include a permanent use or source of hazardous materials. By complying with measure HAZ-1, the Project would have a less than significant impact to the disposal and transportation of hazardous materials.

- b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

**Less than Significant with Mitigation.** Potential hazardous materials during construction activities can occur during ground disturbance within the Project area. Potentially hazardous materials identified adjacent to the Project area include heavy metals in pavement striping and transformers. Based on site observations and review of the database records search, there are no other REC's within the Project area, and Project activities should not affect the pavement striping or the transformers; therefore, no additional testing is recommended.

### **Naturally Occurring Asbestos**

Naturally Occurring Asbestos (NOA) can occur in serpentine rock. The most common forms of NOA minerals are chrysotile, actinolite, and tremolite. A review of the "General Location Guide for Ultramafic Rocks in California – Areas likely to Contain Naturally Occurring Asbestos" (DOC Open-file Report 2000-19, 2000) indicated that NOA was not mapped on, or in the near vicinity of the Project area. No impacts from asbestos containing materials are anticipated.

### **Aerially Deposited Lead**

Aerially deposited lead (ADL) is known to be present within soils near major roadways in operation prior to 1980, when lead was discontinued as a gasoline additive in the State of California. Pezzi Road has been in place at the current location since the early 1900s. ADL might exist along the shoulder of the road; however, concentrations of ADL in excess of regulatory limits are not likely due to the lower classification of Pezzi Road and evidence of disking, grading, and other soil movement activities associated with farming near the road. No impacts to ADL are anticipated. No further analysis or testing for ADL is recommended.

With any project that involves excavation, there is a possibility of encountering unknown hazardous contamination during construction. With the implementation measures HAZ-1 through HAZ-3, Project impacts will be less than significant with mitigation.

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

**No Impact.** No schools are located within one-quarter mile of the Project site; therefore, no impact would occur.

- d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

**No Impact.** EDR, Envirostor and Geotracker were used to find active hazardous waste sites within the Project vicinity. A review of the Department of Toxic Substances Control EnviroStor Database indicated that there were no sites on or near the Project area that were not already included in the record search by EDR. Therefore, there would be no impact related to creating a significant hazard to the public.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?*

**No Impact.** The Project would not result in a safety hazard for people residing or working in the Project area as the Project is not within the vicinity of an airport land use plan or within two miles of a public airport or public use airport. Therefore, there would be no impact related to the safety of the public in the Project area.

- f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Less than Significant with Mitigation.** The existing road and bridge are anticipated to remain open during construction. If a detour is determined to be needed during final design, it would be 4.5 miles long with traffic using SR 88 to the east or Alpine Road to the west. The Project would not require any road closures. As discussed further in Section 2.17, measure TRA-1, a Traffic Management Plan will be prepared should the need for partial road closures occur during construction; therefore, there would be a less than significant impact to emergency access.

- g) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

**No Impact.** The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no wildlands are adjacent to or within the Project area; therefore, no impact is anticipated.

#### **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

In addition to TRA-1 (see Section 2.17), the following measures will be implemented:

**HAZ-1:** There is a potential that the proposed Project could affect yellow thermoplastic pavement markings and other types or colors of street or municipal markings containing lead-based paint. If such markings are affected as a result of the Project, samples will be collected, tested, and/or disposed of in accordance with applicable regulations. Therefore, to avoid impacts from pavement striping during construction, it is recommended that testing and removal requirements for yellow striping and pavement marking materials be performed in accordance with Caltrans SSPs for removing traffic stripes and pavement markings.

**HAZ-2:** Any leaking transformers observed during the course of the Project should be considered a potential polychlorinated biphenyl (PCB) hazard. A detailed inspection of individual electrical transformers was not conducted for this ISA. However, should leaks from electrical transformers (that will either remain within the construction limits or will

require removal and/or relocation) be encountered during construction, the transformer fluid should be sampled and analyzed by qualified personnel for detectable levels of PCB's. Should PCBs be detected, the transformer should be removed and disposed of in accordance with Title 22, Division 4.5 of the California Code of Regulations and any other appropriate regulatory agency. Any stained soil encountered below electrical transformers with detectable levels of PCB's should also be handled and disposed of in accordance with Title 22, Division 4.5 of the California Code of Regulations and any other appropriate regulatory agency.

**HAZ-3:** As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during Project construction. For any previously unknown hazardous waste/ material encountered during construction, the procedures outlined in Appendix E (Caltrans Unknown Hazard Procedures) shall be followed.

***FINDINGS***

The Project would have **Less Than Significant Impacts with Mitigation** relating to hazards and hazardous materials.

## 2.10 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### REGULATORY SETTING

Section 401 of the CWA requires water quality certification from the State Water Resources Control Board (SWRCB) or from a RWQCB when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the U.S.

Along with CWA Section 401, CWA Section 402 establishes the NPDES permit for the discharge of any pollutant into waters of the U.S. The federal EPA has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the Statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 acre require a SWPPP to be prepared and implemented during construction. Caltrans activities less than 1 acre require a WPCP.

San Joaquin County has a Storm Water Management Program (Program), adopted in July of 2010, to meet the terms of the General Permit, regulating storm water discharges from small MS4s. The Program has six control measures, established by the SWRCB, to regulate the discharge of storm water. The control measures include public education and outreach, public involvement, discharge detection and elimination program, construction site storm water runoff control, post-construction storm water management, and pollution prevention/good housekeeping for municipal operations.

### ***AFFECTED ENVIRONMENT***

Much of the information below, pertinent to the Project, is from the Water Quality Assessment Memorandum (Dokken Engineering 2020).

#### **Hydrology**

The proposed Project is within the designated Lower Calaveras Hydrologic Area, which is within the greater North Valley Floor Hydrologic Unit sub watershed of the San Joaquin River Hydrologic Region (Caltrans, 2019). The area is characterized by a Central Valley type climate with hot, dry summers, and cold, rainy winters. Average temperatures for the area range from as low as 37°F to as high as 94°F. Annual precipitation is approximately 17 inches (NOAA, 2019). The Calaveras River is located within the Project area. The Calaveras River originates approximately 23 miles northeast of the Project from the New Hogan Reservoir and outfalls into the San Joaquin River, approximately 11 miles southwest of the Project area.

#### **Groundwater**

The Project is located within the San Joaquin Valley Groundwater Basin within the Eastern San Joaquin Sub-basin. The Eastern San Joaquin Sub-basin is bound on the east by the Sierra Nevada and the Coast Ranges on the west. Annual precipitation within the sub-basin ranges from about 11 inches in the southwest to about 25 inches in the northeast (DWR, 2006). The proposed Project does not anticipate impacting or altering any groundwater basins.

#### **Municipal Supply**

Drinking water within the Project area is supplied by the SEWD derived from the New Hogan Reservoir on the Calaveras River. The Project would not impact any water reservoirs or water recharge facilities.

#### **Flooding**

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) designates the Project area as Zone X (shaded). Zone X (shaded) indicates areas of moderate flood hazard. The Project is also located in Zone AE, which indicates a 100-year special flood hazard area and that the Calaveras River is a “Regulated Floodway” (Appendix D). Due to the Project being located within Zone AE and a regulated floodway, a CVFPB permit will be obtained.

### ***DISCUSSION***

- a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

**Less than Significant with Mitigation.** The Project will disturb greater than one acre; therefore, a Construction Storm Water General Permit is required, consistent with Construction General Permit Order No. 2009-009-DWQ, issued by the SWRCB to address storm water runoff. The permit will address clearing, grading, grubbing, and disturbances to the ground, such as stockpiling, or excavation. This permit will also require the County to prepare and implement a

SWPPP with the intent of keeping all products of erosion from moving off site into receiving waters. The SWPPP includes BMPs to prevent construction pollutants from entering storm water runoff. Mitigation Measures WQ-1 through WQ-5 will be implemented to ensure the Project grading will conform to SWRCB standards and in doing so will ensure the Project impacts will be less than significant.

- b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the Project may impede sustainable groundwater management of the basin?*

**No Impact.** The Project would not directly or indirectly result in the construction of uses that would utilize groundwater supplies. Therefore, there would be no impact related to depletion of groundwater supplies or interference with groundwater recharge.

- 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;*
  - (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
  - (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
  - (iv) impede or redirect flood flows?*

**Less than Significant with Mitigation.** The proposed Project would increase impervious surface area resulting in additional storm water drainage and potential erosion during construction. However, the existing bridge and roadway approach north of the bridge would be removed. The addition of the new roadway and bridge would increase impervious surface area by approximately 28,137 sq. ft (0.65 acre) within the Project area. The Project would be designed consistent with local requirements and the Caltrans Project Planning and Design Guide and Storm Water Management Plan. To potentially reduce runoff, site design BMPs would be incorporated during final design as described in WQ-1. As the bridge replacement would only permanently impact 0.015 acre of the Calaveras River, the change will not impede or redirect flood flows. Therefore, a less than significant impact would occur, with mitigation incorporated.

- d) *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?*

**No Impact.** The Project would not create a potential situation for inundation by seiche, tsunami, or mudflow. The Project is located in a dominantly flat landscape, is not located in proximity to a large body of water, and is not near the coastal waters; therefore, **No Impact** would occur.

- e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

**Less than Significant with Mitigation.** The Project may have short-term impacts associated with sediment and runoff during grading and construction. Material imported during this process will be kept in piles of staged soil, and/or re-graded and distributed within the Project site. As noted above, the Project is subject to NPDES regulations since these improvements will exceed one acre. Compliance with existing regulations and implementation of BMPs would reduce potentially significant impacts associated erosion or siltation on- or offsite to levels less than

significant. Implementation of measures WQ-1 through WQ-5 will ensure that Project impacts to water quality will be less than significant.

#### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

**WQ-1:** BMPs will be incorporated into Project design and Project management to minimize impacts on the environment including the release of pollutants (oils, fuels, etc.):

- The area of construction and disturbance would be limited to as small an area as feasible to reduce erosion and sedimentation.
- Measures would be implemented during land-disturbing activities to reduce erosion and sedimentation. These measures may include mulches, soil binders and erosion control blankets, silt fencing, fiber rolls, temporary berms, sediment desilting basins, sediment traps, and check dams.
- Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around areas to be protected.
- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.
- All construction roadway areas would be properly protected to prevent excess erosion, sedimentation, and water pollution.
- All vehicle and equipment maintenance procedures would be conducted off-site. In the event of an emergency, maintenance would occur away from the Calaveras River.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered, as feasible.
- Energy dissipaters and erosion control pads would be provided at the bottom of slope drains. Other flow conveyance control mechanisms may include earth dikes, swales, or ditches. Stream bank stabilization measures would also be implemented.
- All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state.
- All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native or approved non-invasive exotic species.
- All construction materials would be hauled off-site after completion of construction.

**WQ-2:** Any requirements for additional avoidance, minimization, and/or mitigation measures will be adhered to from all required regulatory agencies.

**WQ-3:** The Project limits in proximity to the Calaveras River will be marked as an ESA or either be staked or fenced with high visibility material to ensure construction activities will not encroach further beyond established limits.

**WQ-4:** The construction contractor will adhere to the SWRCB Order No. 2012-0006-DWQ NPDES Permit pursuant to Section 402 of the CWA. This permit authorizes storm

water and authorized non-storm water discharges from construction activities. As part of this Permit requirement, a SWPPP or Water Pollution Control Plan (if ground disturbance is less than 1 acre) will be prepared prior to construction consistent with the requirements of the RWQCB. This SWPPP/Water Pollution Control Plan will incorporate all applicable BMPs to ensure that adequate measures are taken during construction to minimize impacts to water quality.

**WQ-5:** Storm water systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources.

***FINDINGS***

The Project would have **Less Than Significant Impacts with Mitigation** relating to hydrology and water quality.

## 2.11 LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>

### AFFECTED ENVIRONMENT

The Project is located in a rural part of San Joaquin County approximately 7 miles northeast of Stockton, California. According to the San Joaquin County 2035 General Plan, Land Use Element, all parcels within the Project area are listed as General Agriculture and zoned for agriculture (AG-40). The property within the Project area is currently used for orchards and rural residential housing. The Calaveras River is currently used by the SEWD to convey water for agricultural use.

### DISCUSSION

#### a) *Physically divide an established community?*

**No Impact.** The Project would not divide an established community. The area is zoned for agriculture, and there are several single residential homes along Pezzi Road and adjacent to the Calaveras River. The Project would realign Pezzi Road approaches to replace the sharp curves with a new 50-mph alignment meeting the AASHTO Green Book design specifications. Based on preliminary engineering, the proposed alignment would require right-of-way acquisitions of the orchards to the north and south of the proposed bridge for the roadway footprint, as well as an orchard remnant that would exist between the new and existing roads (Figure 3). The realignment would not be placed within an established community and land use and the area would continue to be zoned for agriculture; therefore, there would be no division of an established community. **No Impacts** would occur.

#### 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?*

**Less than Significant Impact.** The Project does not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect. The Project is a bridge replacement and roadway realignment project and would not change any land use. Parcels adjacent to Pezzi Road would continue to be used for agriculture and rural residential housing. The Project is located within CVFPB, U.S. Army Corps of Engineers, CDFW, RWQCB, and SEWD jurisdiction and will require permits and/or notifications for work within the river channel. Therefore, there will be **Less than Significant Impacts** to land use plan, policy, or regulations.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No impact to land use and planning resources are anticipated; therefore, no avoidance, minimization, and/or mitigation measures will be required.

### FINDINGS

The Project would have **Less than Significant Impacts** relating to land use and planning.

## 2.12 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<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"/>

### **AFFECTED ENVIRONMENT**

According to the San Joaquin 2035 General Plan (2016), the primary mineral resources in San Joaquin County are sand and gravel aggregate. Limited extraction of peat, gold, and silver is also known to occur. However, it is believed that all significant gold deposits have been fully extracted, and gold is typically found only as a secondary product of sand and gravel processing. Currently, sand and gravel deposits constitute the only commercially significant extractive mineral resource in the region.

### **DISCUSSION**

- 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?*

**No Impact.** According to the San Joaquin 2035 General Plan, the Project area does not have known mineral resources that would be of value to the region and the residents of the state; therefore, the Project will have no impact to known mineral resources.

- 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?*

**No Impact.** According to the San Joaquin 2035 General Plan, the Project area does not have any areas that are listed as a locally important mineral resource recovery site; therefore, the Project will have no impact to mineral resources.

### **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

No avoidance, minimization, and/or mitigation measures will be required.

### **FINDINGS**

The Project would have **No Impact** relating to mineral resources.

## 2.13 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY ENVIRONMENT

Pursuant to the County's 2035 General Plan Environmental Impact Report (EIR), the San Joaquin County Code establishes noise standards for transportation and stationary noise sources. The overall noise goal for the County is to limit the exposure of the community to excessive noise levels. The code also specifies exemptions and prohibited activities. Proposed noise-sensitive land uses that would be affected by existing or planned transportation noise sources (e.g., vehicular traffic or trains) would be required to mitigated exterior noise exposure to a level not exceeding the County's standards as shown in Table 7. These transportation noise criteria also apply to private development, including new transportation facilities.

**Table 7: Maximum Allowable Noise Exposure**

MAXIMUM ALLOWABLE NOISE EXPOSURE FROM TRANSPORTATION NOISE SOURCES		
Noise-Sensitive Land Use Types	Outdoor Activity Areas (dBA Ldn)	Interior Spaces (dBA Ldn)
Residential	65	45
Administrative Office	-	45
Child Care Services-Child Care Centers	-	45
Community Assembly	65	45
Cultural and Library Services	-	45
Educational Services: General	-	45
Funeral and Interment Services – Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45
Professional Services	-	45
Public Services (excluding Hospitals)	-	45
Public Services (hospitals only)	65	45
Recreation – Indoor Spectator	-	45
Religious Assembly	65	45

NOTES: These standards apply to new or existing residential areas affected by new or existing non-transportation sources. Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.

## ***AFFECTED ENVIRONMENT***

The Project area is within a rural area of San Joaquin County. The noise environment near the Project is dominated by traffic sources. Background noise levels are influenced by Pezzi Road and the existing surrounding residential and agricultural areas. The existing noise level ranges from 29 to 51 dB. A Noise Study Report was prepared in March 2020 to determine potential noise impacts caused by traffic and construction due to the Project. Noise measurements were conducted at two locations in August 2019 where concurrent traffic volumes were recorded through the use of a video camera. A total of five existing receiver locations were evaluated in the model to determine the predicted noise levels that would occur as a result of the Project. These modeled noise receptor locations are shown on Figure 9.

## ***DISCUSSION***

- 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?*

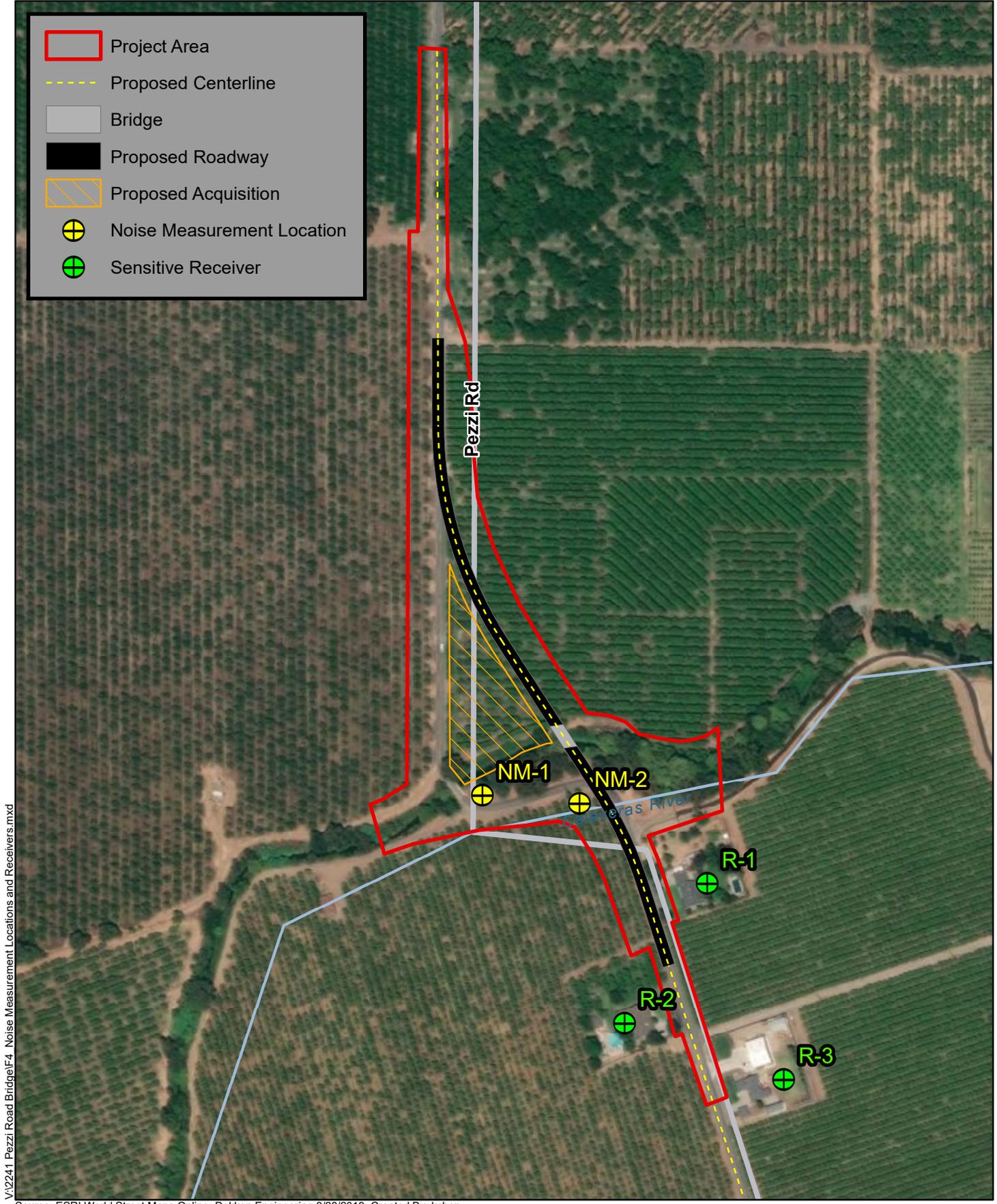
**Less than Significant Impact with Mitigation.** The San Joaquin County 2035 General Plan EIR establishes noise standards for maximum allowable noise exposure due to transportation sources and performance standards for fixed noise sources. Transportation noise standards (65 decibel A-weighted (dBA)  $L_{dn}$ /Community Noise Equivalent Level (CNEL)) are applied at the outdoor activity area of noise sensitive land use (residential) where it is not possible to reduce noise in outdoor activity areas to 65 dB  $L_{dn}$ /CNEL or less using a practical application of the best-available noise reduction measures.

Fixed noise sources are not to exceed 50 dBA  $L_{eq}$  and 70 dBA  $L_{max}$  during daytime hours (7:00 A.M. to 10:00 P.M.) and 45 dBA  $L_{eq}$  and 65 dBA  $L_{max}$  during nighttime hours (10:00 P.M. to 7:00 A.M.) as measured at the property line of noise sensitive land uses.

## **Temporary Noise Impacts**

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. The nearest receptor is over 500 feet from the extent of construction. This would drop the noise levels more than 20 dB.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Standard Specification 14-8.02, SSP14-8.02 and applicable local noise standards. Construction noise would be short-term and intermittent. In addition, the local County noise ordinance, San Joaquin County Noise Control Ordinance, would be followed. The County's Municipal Code (Chapter 9-1025) specifically prohibits the operation of any construction equipment at or beyond the property line of any property between the hours of 9:00 p.m. to 6:00 a.m. as indicated in measure NOI-1.



V:\2241 Pezzi Road Bridge\F-4 Noise Measurement Locations and Receivers.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 8/28/2019; Created By: kchen



**FIGURE 9**  
**Noise Measurement and Receiver Locations**  
 Federal Project: BRLO 5929(240)  
 Pezzi Road Bridge Replacement Project  
 San Joaquin County, California

## **Permanent Noise Impacts**

A Noise Study Report was prepared in March 2020 to determine potential permanent noise impacts caused by traffic due to the Project. A total of five (5) existing receiver locations were evaluated in the noise model (Figure 9).

Existing average daily traffic data was obtained from the current bridge inspection report and converted into existing peak hour data. Peak hour traffic is assumed to be ten percent of average daily traffic volumes. Existing peak hour traffic was entered into the noise model to estimate existing peak hour traffic noise levels.

The results of the existing traffic noise modeling are shown in Table 8. As shown in Table 8, existing noise levels in the proposed Project area range from 29 to 51 dBA  $L_{eq}(h)$ . Noise levels do not currently exceed the County's accepted level of noise for residential and/or agricultural land uses at any of the sensitive receiver locations analyzed.

**Table 8: Summary of Modeled and Existing Noise Levels**

Receiver ID	Location	Type of Land Use	Number of Dwelling Units	Modeled Existing Peak Noise Level, dBA $L_{eq}(h)$
R1	9090 Pezzi Road	SFR	1	36
R2	9033 Pezzi Road	SFR	1	29
R3	8950 Pezzi Road	SFR	1	37
NM-1	Northeast corner of agricultural property immediately south of Pezzi Road Bridge	SFR	1	48
NM-2	Immediately adjacent southeast of Pezzi Road Bridge	SFR	1	51

The noise study was conducted to determine the future traffic noise impacts at sensitive receivers along the proposed Pezzi Road bridge replacement and road realignment. Potential long-term noise impacts associated with Project operations arise solely from traffic noise. Traffic noise was evaluated for future scenario Design Year 2040 for the Project as worst-case conditions for five (5) receiver locations. The predicted future worst-case traffic noise levels for the Project were extrapolated from existing traffic data and converted into future peak hour data. The noise model is sensitive to the volume of trucks on the roadway because trucks contribute disproportionately to the traffic noise. Truck percentages on modeled roadways were obtained via email from the Project's traffic engineer. The modeled future noise levels for the Project were compared to the County's noise ordinance standards to determine whether a traffic noise impact would occur. When traffic noise impacts occur, noise abatement measures must be considered.

The Design Year 2040 traffic noise modeling results for the Project range from 33 to 56 dBA  $L_{eq}(h)$ . The realignment of Pezzi Road would allow for increased average traffic speeds on Pezzi Road, causing an overall increase in ambient noise levels. However, permanent Project noise levels would not approach or exceed the County's standards at any sensitive receptors as a result of the proposed Project. For receivers R-1 through R-3, noise levels ranged from 33 to 43 dBA  $L_{eq}(h)$  and would not exceed the County's standard of 65 dBA for residential land use. Receivers NM-1 and NM-2 would be exposed to noise levels ranging from 46 to 56 dBA. Therefore, the Project would not generate a permanent substantial increase in noise, and no noise abatement

evaluation is required. Measure NOI-1 will be implemented to further reduce potential noise impacts. Therefore, the Project will have less than significant impacts with mitigation incorporated.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

**Less than Significant with Mitigation.** The Project area is within a rural area of San Joaquin County with a limited number of rural residences within the Project vicinity. The Project will be driving piles for the abutments of the bridge, which may require vibratory pile driving and limited pile driving. These temporary construction activities within the Project vicinity are anticipated to create groundborne vibration, but the nearest receptor to this activity will be more than 500 feet away and groundborne vibration effects of pile driving would be at the threshold of distinctly perceptible and well below the threshold of effects. Additionally, the implementation of measure NOI-1 will further reduce noise impacts to a less than significant level.

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?*

**No Impact.** The Project is not located within or adjacent to an airport land use plan, or where such a plan has not been adopted, or within two miles of a public airport or public use airport; therefore, no impact would occur, and no mitigation is required.

#### ***AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES***

**NOI-1:** To minimize the construction-generated noise, abatement measures from Standard Specification 14-8.02 "Noise Control" and SSP 14-8.02 must be followed:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip an internal combustion engine with the manufacturer recommended muffler.
- Do not operate an internal combustion engine on the job site without the appropriate muffler.

#### ***FINDINGS***

The Project would have **Less Than Significant Impact with Mitigation** relating to noise.

## 2.14 POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial 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 housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

CEQA also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

### DISCUSSION

- a) *Induce substantial 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)?*

**No Impact.** The Project is located in rural San Joaquin County that supports agricultural land. There is no planned development along Pezzi Road. The adjacent parcels would continue to be used for agriculture and existing rural residential housing. The Project would not induce population growth in the area, either directly or indirectly; therefore, the Project would have no impact related to population growth, and no mitigation is required.

- b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

**No Impact.** The proposed realignment of Pezzi Road would require right-of-way acquisitions of the orchards to the north and south of the proposed bridge for the roadway footprint, as well as an orchard remnant that would exist between the new and existing roads; however, no acquisition of housing or businesses would occur. The Project would not displace any number of existing housing or necessitate the construction of replacement housing. The Project will have no impact related to displacement of housing or businesses and no mitigation is required.

- c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

**No Impact.** The Project would not displace any number of people, or necessitate the construction of replacement housing; therefore, the Project would have no impact related to displaced persons, and no mitigation is required.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The Project will have no impacts relating to population and housing; therefore, no avoidance, minimization, and/or mitigation measures will be required.

***FINDINGS***

The Project would have **No Impacts** relating to population and housing.

## 2.15 PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### **AFFECTED ENVIRONMENT**

The nearest fire station, Stockton Firefighters, is located 3.6 miles west of the Project area at 3606 Hendrix Drive within the City of Stockton. The nearest police station is located 4.5 miles south west of the Project area at 2720 Wilcox Road within the City of Stockton. The nearest school, Cesar Chavez High School, is approximately 4.3 miles south west of the Project area on 2929 Windflower Lane in the City of Stockton. The nearest park, Panella Park, is approximately 5 miles south west of the Project area within the City of Stockton.

### **DISCUSSION**

- 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: fire protection, police protection, schools, parks, and/or other public facilities?*

**Less than Significant.** There are no public services located within the Project area. The Project is located in rural San Joaquin County, which consists of agricultural lands and low-density rural residential housing. The Project consists of replacing Pezzi Road bridge and realigning the road for safety purposes and will not restrict access to any park or other public facilities, nor will it construct any facilities that would impact service ratios or response times for emergency services. The Project may require partial lane closure for realignment of the road; however, a Traffic Management Plan would be implemented (see TRA-1 in Section 2.17). Therefore, the Project would have a less than significant impact to public services.

### **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

The Project will have no impacts relating to public services; therefore, no avoidance, minimization, and/or mitigation measures will be required.

***FINDINGS***

The Project would have **No Impacts** relating to public services.

## 2.16 RECREATION

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### **AFFECTED ENVIRONMENT**

As stated in the previous section, the nearest public park, Panella Park, is approximately 5 miles south west of the Project area within the City of Stockton.

### **DISCUSSION**

- a) *Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

**No Impact.** The bridge replacement and road realignment would not 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. The nearest recreational facility is Panella Park, which is approximately 5 miles south west of the Project area within the City of Stockton. No other recreational facilities are located within or near the Project area; therefore, no impact would occur.

- b) *Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The Project does not include other recreational facilities, nor does it require the construction or expansion of other recreational facilities; therefore, no impact would occur.

### **AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

No impact to recreation facilities would occur; therefore, no avoidance, minimization, and/or mitigation measures will be required.

### **FINDINGS**

The Project would have **No Impact** relating to recreation.

## 2.17 TRANSPORTATION/TRAFFIC

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **AFFECTED ENVIRONMENT**

According to the San Joaquin County 2035 General Plan (2016), when measuring levels-of-service (LOS), San Joaquin County uses the criteria established in the *Highway Capacity Manual* published and updated by the Transportation Research Board. LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, freedom to maneuver, volume, density, and capacity. Six levels are defined, from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents “at-capacity” operations. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

For roadways within San Joaquin County, the 2035 General Plan (2016) states that the County shall maintain LOS standards consistent with the SJCOG Congestion Management Program (CMP) for State highways and designated County roadways and intersections of regional significance. Per the CMP, all designated CMP roadways and intersections shall operate at an LOS D or better except for roadways with “grandfathered” LOS. LOS for State highways shall be maintained in cooperation with Caltrans. The County LOS standards for intersections is LOS “D” or better on Minor Arterials and roadways of higher classification and LOS “C” or better on all other non-CMP designated County roadways and intersections.

### **DISCUSSION**

- a) *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

**No Impact.** As the Project is a bridge replacement and road realignment project, there will be no change to the bridge width or carrying capacity. Pezzi Road would be realigned for safety purposes and would not include additional lanes. Therefore, the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, and no impact would occur.

- b) *Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

**No Impact.** CEQA Guidelines section 15064.3 describes specific considerations for evaluating a project’s transportation impacts. Generally, Vehicle Miles Traveled (VMT) is the most appropriate

measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project. Subdivision (b) defines the criteria for analyzing transportation impacts. However, as the Project is a bridge replacement and road realignment project, the Project would have no change on VMT. Per section 15064.3 (b)(2), transportation projects that have no impact on VMT are presumed to cause a less than significant transportation impact, and as there will be no changes in the roadway, the Project would have no impact to VMT.

- c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**Less than Significant Impact.** The Project would realign the roadway approaches to replace the sharp curves with a new 50-mph alignment meeting the AASHTO Green Book design specifications. The total improved road length would be approximately 1,570 feet. The new alignment would consist of approximately 1,925-foot radius reversing curves that meet a 50-mph design speed. However, changes in the geometry of the road would occur for safety purposes to remove the existing sharp curves which pose a safety hazard. The Project would provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans. Therefore, impacts are considered less than significant, and mitigation is not required.

- d) *Result in inadequate emergency access?*

**Less than Significant Impact with Mitigation.** The existing road and bridge are anticipated to remain open during construction. If a detour is determined to be needed during final design, it would be 4.5 miles long with traffic using SR-88 to the east or Alpine Road to the west. The Project would not require any road closures. Further, a Traffic Management Plan will be prepared should the need for partial road closures occur during construction; therefore, there would be a less than significant impact to emergency access.

#### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

**TRA-1:** Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.

#### ***FINDINGS***

The Project would have **Less than Significant Impact with Mitigation** relating to transportation/traffic.

## 2.18 TRIBAL CULTURAL RESOURCES

### TRIBAL CULTURAL RESOURCES:

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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### REGULATORY SETTING

Effective July 1, 2015, CEQA was revised to include early consultation with California Native American tribes and consideration of tribal cultural resources (TCRs). These changes were enacted through AB 52. By including TCRs early in the CEQA process, AB 52 intends to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to TCRs. CEQA now establishes that a “project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment” (PRC § 21084.2).

To help determine whether a project may have such an adverse effect, the PRC requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. The consultation must take place prior to the determination of whether a negative declaration, MND, or EIR is required for a project (PRC § 21080.3.1). Consultation must consist of the lead agency providing formal notification, in writing, to the tribes that have requested notification or proposed projects within their traditionally and culturally affiliated area. AB 52 stipulates that the NAHC shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated within the project area. If the tribe wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. Once the lead agency receives the tribe’s request to consult, the lead agency must then begin the consultation process within 30 days. If a lead agency determines that a project may cause a substantial adverse change to TCRs, the lead agency must consider measures to mitigate that impact. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC § 21080.3.2). Under existing law, environmental documents must not include information about the locations of an archaeological site or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records act. TCRs are also exempt from disclosure. The term “tribal cultural resource” refers to either of the following:

Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources
- Included in a local register of historical resources as defined in subdivision (k) of California PRC Section 5020.1
- A resource determined by a California lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the PRC Section 5024.1.

### ***AFFECTED ENVIRONMENT***

The APE was established as the area of direct and indirect effects which encompasses an approximately 34.1-acre area. This includes all staging areas, street closures, vegetation/tree removal, approach roadway realignment, bridge replacement, ground disturbance, temporary construction easements, and utility relocation. The APE extends along Pezzi Road approximately 1,200 feet to the north and south of the Calaveras River (Figure 6). The vertical APE consists of a maximum of 2 feet of depth below existing ground surface to accommodate earthwork for the construction of the roadway and required for all roadway approach realignment, vegetation removal, and fill compaction. Bridge abutments will require an excavation depth of 8 feet below existing ground surface, plus an additional 55 feet (for a total of approximately 70 feet) below existing ground surface to accommodate piles driven into the ground. Underground utilities may require relocation, and all relocation will occur within 5 feet below ground surface.

Efforts to identify potential cultural resources in the APE included background research, a search of previously recorded archaeological site records and cultural resource identification reports on file at the California Historical Resources Information System CCIC, consultation with the NAHC, and a pedestrian ground surface survey.

Archaeologist Dr. Brian S. Marks conducted an archaeological field survey of the APE on March 28, 2017. The pedestrian survey was conducted at roughly 10-meter transect intervals. All Project area conditions and cultural resources were fully recorded in the field notes. Coverage varied in areas with vegetation coverage.

Exposed subsurface cuts, such as the banks within Calaveras River, roadway cuts, and bank cuts were observed for the presence of archaeological resources, soil color change, and/or staining that could indicate past human activity or buried deposits. The property north of the river and east of Pezzi Road could not be surveyed due to lack of permission to access the property (APN 08902037). An inspection of the property from the road and from the dry riverbed saw that the ground surface was bare ground beneath an orchard of almond trees with the rows of grass. By comparing this property with the surrounding area and examining historic aerial photographs, it is unlikely that a pedestrian inspection of this property would have revealed any cultural resources. Additionally, with the planting and removal of trees, the upper 5 feet of the surface soil would be heavily disturbed and the probability of finding intact buried deposits in this area is low. Therefore, the pedestrian survey conducted on March 28, 2017 did not reveal any archaeological resources.

### ***DISCUSSION***

- a) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)*

**Less than Significant with Mitigation.** The Project is not anticipated to cause a substantial adverse change in the significance of resources eligible for listing in the California Register of Historical Resources, or in a local register of historic resources as defined in PRC section 5020.1(k). No cultural resources were identified during the visual survey, or the record search. No impacts are anticipated for the Project related to archaeological resource; however, with any Project requiring ground disturbance, there is always the possibility that unmarked cultural resources may be unearthed during construction. This impact would be considered potentially significant. Implementation of Mitigation Measure CR-1 and CR-2 would result in less than significant impacts to historical resources.

- b) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

**Less than Significant with Mitigation.** In an effort to identify potential TCRs that might be affected by the undertaking, a pedestrian survey, background research, and consultation with individuals and organizations were conducted. A record search conducted at the CCIC identified eleven cultural resources within a one-mile radius of the APE and no resources within the APE. The pedestrian survey did not observe any cultural resources within the APE.

On February 22, 2019, Dokken Engineering sent a letter and a map depicting the Project vicinity to the NAHC in West Sacramento, asking the commission to review the sacred land files for any Native American cultural resources that might be affected by the Project. The request to the NAHC seeks to identify any Native American cultural resources within or adjacent to the Project area. On March 22, 2019, Katy Sanchez, Staff Services Analyst, informed Dokken Engineering that a review of the sacred lands was completed and returned negative results.

On December 17, 2019, AB52 consultation letters were sent by mail to the seven Native American individuals on the list provided by the County and NAHC. These letters were also sent digitally via email to those with emails provided by the County and NAHC. The letters provided a summary of the Project and requested information regarding comments or concerns the Native American community might have about the Project. For those individuals that did not reply to the letter, follow-up emails were sent on January 29, 2020 to those individuals with email contact. Follow-up phone calls were placed to all non-responders on January 29, 2020. The following discussion presents a summary of consultation efforts for each individual on the list provided by the NAHC.

*Rhonda Morningstar-Pope, Chairperson, Buena Vista Rancheria of Me-Wuk Indians.* A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. On January 15, 2020, an email response from Richard Hawkins of the Buena Vista Rancheria stated that the tribe has no concerns about the Project but would like to be notified if any cultural resources are discovered during construction.

*California Valley Miwok Tribe.* A letter was mailed on December 17, 2019. As there was no email address, a phone call was placed on January 29, 2020. There was no answer and no option to leave a voice mail was available. An email was sent on March 5, 2020 with a digital copy of the notification letter attached. No response has been received to date.

*California Valley Miwok Tribe AKA Sheep Rancheria of Me-Wuk Indians of CA.* A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. A follow up email with a digital copy of the letter attached was sent on January 29, 2020 and March 5, 2020. No response has been received to date.

Sara Dutschke Sethchwaelo, Chairperson, Lone Band of Miwok Indians. A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. A follow up email with a digital copy of the letter attached was sent on January 29, 2020 and March 5, 2020. No response has been received to date.

Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe. A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. A follow up email with a digital copy of the letter attached was sent on January 29, 2020. Chairperson Perez responded via email that although the pedestrian survey, record search, and sacred lands file search did not identify any Native American resources within the Project area, there is still potential to encounter such resources. She requested consultation and a site visit. A site visit was set for June 5, 2020. A field meeting was held with Kathy Erolinda Perez, Erolinda Perez, Joan Faustorilla (County Project Engineer), and Amy Dunay (Dokken Engineering archaeologist). Project details and cultural resource identification efforts to date were discussed. Ms. Kathy Perez noted that burials and other Native American cultural resources have been found within several miles of the Project area and that in general, she is concerned about buried resources. She recommended Native American awareness training be provided to construction staff and that Native American monitoring also occur during construction, including any removal of trees. She provided more comprehensive measures in an email following the meeting. These recommended measures are included in measures CR-1 and CR-2. Worker Environmental Training will be provided during construction and Caltrans standard guidelines and protocols regarding inadvertent discoveries will be followed should any cultural resources be identified during construction.

Gene Whitehouse, Chairperson, United Auburn Indian Community of the Auburn Rancheria. A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. An email was received on December 26, 2019 from Anna Starkey, Cultural Regulatory Specialist for the UAIC, stating that they have no knowledge of resources within the Project area. The UAIC requested copies of the cultural documents, copies of the IS/MND, and that workers be provided with cultural awareness training. A response was sent on December 30, 2019 stating that the UAIC will be sent a copy of the HPSR, once available. A second email was received on January 14, 2020 with a letter attached from Chairman Whitehouse requesting consultation under AB52. The letter and email also requested copies of the record search, cultural documents, and a site visit. The record search results were sent to Ms. Starkey on January 27, 2020 and requested available dates for site visit. A follow up email requesting site visit availability was sent on March 5, 2020. The UAIC responded that they prefer to conduct cultural surveys in conjunction with the consulting archaeologist and inquired as to whether other tribes have engaged in consultation and have requested a site visit. A response email was sent the same day to the UAIC providing dates and times in March for a site visit and confirming that there were other tribes consulting with the County and that site visits with these tribes were being scheduled. No tribe names were provided.

A field meeting was later held with Antonio Ruiz (UAIC), Travis Young (UAIC), Joan Faustorilla (County Project Engineer), and Amy Dunay (Dokken Engineering archaeologist) on June 9, 2020. Project details and cultural resource identification efforts to date were discussed. Mr. Ruiz noted that he needed to check the UAIC's internal database for the presence of Native American cultural resources, but stated that in general, he is concerned about buried resources within the Project area. A site survey within the publicly accessible embankment of the river was conducted, but visibility was zero percent. Mr. Ruiz inquired as to whether other tribes had consulted on the Project. Upon hearing that Katherine Perez was actively consulting, he stated that the UAIC would defer to her, but would still like to review the UAIC internal database and receive copies of the

records search, geotechnical report, tree survey/data, and draft cultural report to gain a better understanding of the Project area. A copy of the draft HPSR/ASR, which included the records search and all current Native American consultation, was provided via email on July 6, 2020 while the Project area GIS shapefile and draft geotechnical report were provided via email on July 8, 2020. The July 8, 2020 email also provided the tree species within the Project area and relayed that tree data (numbers, species, sizes, etc.) would not be known until the permitting phase, which would occur after the environmental document approval phase. Both July emails requested that the UAIC provide the results of their internal database search. A July 6, 2020 email from the UAIC stated that they anticipated providing the results of their internal database search, as well as recommendations for the Project, "later in the week". No email or other correspondence transmitting this information was received by the end of that week or as of the date of this document. *Raymond Hitchcock, Chairperson, Wilton Rancheria*. A letter was mailed on December 17, 2019, with an email sent the same day with a digital copy of the letter. Mariah Mayberry of the Wilton Rancheria responded via email on January 14, 2020 that the tribe wishes to consult on this Project. They requested copies of the cultural resources record search and wanted to be included in cultural surveys. An email was sent to Ms. Mayberry on January 20, 2020, with copies of the cultural resources record search results and informed Ms. Mayberry that the pedestrian inspection was completed in 2017. No further response has been received to date.

The Project is not anticipated to cause a substantial adverse change to a TCR pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 5024.1. No cultural resources were identified during the visual survey, record search, or Native American consultation. No impacts are anticipated for the Project related to archaeological resource; however, with any Project requiring ground disturbance, there is always the possibility that unmarked cultural resources may be unearthed during construction. Implementation of measures CR-1 and CR-2 would result in a less than significant impact to TCRs.

#### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

Mitigation Measures CR-1 and CR-2 within Section 2.5 will be implemented for any impacts relating to Tribal Cultural Resources.

#### ***FINDINGS***

The Project would have **Less Than Significant Impact with Mitigation** relating to Tribal Cultural Resources.

## 2.19 UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### DISCUSSION

- a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

**Less than Significant with Mitigation.** The Project would not include the construction of any wastewater-generating uses, nor electric power, natural gas, or telecommunication facilities. The Project would not increase population in the Project vicinity, and there would be no additional wastewater flows as a result of Project development. The proposed Project would increase impervious surface area resulting in additional storm water drainage. However, the existing bridge and roadway approach north of the bridge would be removed. The addition of the new roadway and bridge would increase impervious surface area by approximately 28,137 sq. ft (0.65 acre) within the Project area. The Project would be designed consistent with local requirements and the Caltrans Project Planning and Design Guide and Storm Water Management Plan. To potentially reduce runoff, site design BMPs would be incorporated during final design as described in WQ-1 (see Section 2.10). To further prevent items impacts to the Calaveras River and water quality, measures WQ-2 through WQ-5 would be incorporated during final design. Therefore, impacts associated with development of the Project would be considered less than significant.

- b) *Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?*

**No Impact.** The Project would not result in the need for new or expanded water supplies. No impacts would result from development of the Project, and no mitigation is required.

- 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?*

**No Impact.** The Project is a bridge replacement and roadway realignment project. The Project would not include the construction of any wastewater-generating uses. The Project would not increase population in the Project vicinity, and there would be no additional wastewater flows as a result of Project development; therefore, the Project would not result in the need for new or expanded wastewater facilities. No impact would occur, and no mitigation is required.

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?*

**Less Than Significant.** The Project would not generate substantial solid waste during operation. Solid waste may be generated during construction; however, the amount would not exceed landfill capacities because the amounts would not be substantial and would only occur during construction. Therefore, impacts associated with development of the Project would be considered less than significant and no mitigation is required.

e) *Comply with federal, state, and local statutes and regulations related to solid waste?*

**Less Than Significant.** The Project would comply with federal, state, and local statutes and regulations related to solid waste; therefore, impacts would be considered less than significant, and no mitigation is required.

#### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

Mitigation measures WQ-1 through WQ-5 in Section 2.10 will be implemented for any impacts relating to Utilities and Service Systems.

#### ***FINDINGS***

The Project would have **Less Than Significant Impact with Mitigation** relating to utilities and service systems.

## 2.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

### AFFECTED ENVIRONMENT

According to the CAL FIRE Adopted Fire Hazard Severity Zone maps for Local, State, and Federal Responsibility Areas (CAL FIRE 2007), the Project is not located within a designated “very high fire hazard severity” area.

### DISCUSSION

a) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

**No Impact.** The Project is not located within a very high fire hazard severity area and would not substantially impair an adopted emergency response plan or emergency evacuation plan. Pezzi Road will remain open during construction. No impact would occur, and no mitigation is required.

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?*

**No Impact.** The Project would not exacerbate wildfire risks as the Project would not change any of the existing slopes associated with the Calaveras River. The Project is a bridge replacement and road realignment project and does not increase the number of occupants within or adjacent to the Project area; therefore, no impact would occur.

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?*

**No Impact.** The Project would require the installation of a new alignment of Pezzi Road; however, neither maintenance or installation of the road are anticipated to exacerbate fire risk or result in temporary or ongoing impacts to the environment. Utilities would be relocated as a result of the realigned road; however, no additional utilities would be installed other than what currently exist. Therefore, no impact would occur.

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?*

**Less than Significant Impact.** The Project would not expose people or structures to downslope or downstream flooding or landslides as the Project would not change any of the existing slopes or grades adjacent to the Project or associated with the Calaveras River levee system. As the Project is a replacement and realignment project with minimal increase to impervious surfaces, runoff will be similar to the existing. Additionally, as the Project is not located within a designated “very high fire hazard severity” area, it is anticipated there will be a less than significant impact.

***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

No avoidance, minimization, and/or mitigation measures are required for wildfires.

***FINDINGS***

The Project would have a **Less than Significant Impact** relating to wildfires.

## 2.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the Project have environmental effects which 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"/>

### DISCUSSION

- a) *Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?*

**Less Than Significant with Mitigation.** Implementation of the Project would have the potential to degrade the quality of the existing environment. Potential impacts have been identified related to Biological Resources (2.4), Cultural Resources (Section 2.5), and Tribal Cultural Resources (Section 2.18). Mitigation measures have been identified related to individual resource-specific impacts. Therefore, impacts are considered less than significant with mitigation.

- 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)?*

**Less than Significant.** All potential significant impacts identified for this Project would be addressed with avoidance, minimization, and mitigation. Past projects near the Pezzi Road Bridge have been cleared through the CEQA process and potentially significant impacts from those previous projects would have already been mitigated for. No cumulative effects are anticipated because no resources would be adversely affected by the Project, or the Project effects would be localized and of limited extent. No impact would occur in relation to cumulatively considerable effects.

- c) *Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

**Less than Significant with Mitigation.** The Project would not cause significant adverse effects to human beings, either directly or indirectly with mitigation incorporated. Potential impacts have been identified related to Aesthetics, Air Quality, Hazards and Hazardous Materials, Hydrology

and Water Quality, Noise. Mitigation measures have been identified related to individual resource-specific impacts. Mitigation measures would reduce the level of all Project-related impacts to less than significant levels. Therefore, impacts are considered less than significant with mitigation.

***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

No specific avoidance, minimization, and/or mitigation measures for cumulative impacts are needed for the Pezzi Road Bridge Replacement Project. The following measures discussed in other sections in this document would ensure that cumulative impacts would be less than significant should they occur.

- Measures VIA-1 through VIA-6
- Measures AQ-1 through AQ-3
- Measures BIO-1 through BIO-26
- Measures CR-1 and CR-2
- Measure GHG-1
- Measures HAZ-1 through Haz-3
- Measure NOI-1
- Measure TRA-1
- Measures WQ-1 through WQ-5

### **3.0 Comments and Coordination**

This chapter summarizes the County's efforts to identify, address and resolve Project-related issues through early and continuing coordination.

#### **3.1 CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES**

Coordination with the following agencies was initiated for the Pezzi Road Bridge Replacement Project:

California Department of Fish and Wildlife (CDFW)  
Central Valley Flood Protection Board (CVFPB)  
Native American Heritage Commission (NAHC)  
Regional Water Quality Control Board (RWQCB)  
United States Army Corps of Engineers (USACE)  
United States Coast Guard (USCG)  
United States Fish and Wildlife Service (USFWS)  
National Marine Fisheries Service (NMFS)

#### **3.2 PUBLIC PARTICIPATION**

The public comment period for the Project will occur from October 28, 2021 to December 1, 2021. All written comments received by the County will be incorporated into the Final Initial Study/Mitigated Negative Declaration and added in an appendix. Any additions or corrections to the IS/MND subsequent to public comments will be addressed within the final document.

## **4.0 List of Preparers**

### **DOKKEN ENGINEERING**

Amy Bakker, Associate Environmental Planner  
Tim Chamberlain, Senior Environmental Planner  
Scott Salembier, Associate Environmental Planner / Biologist  
Ken Chen, Environmental Planner / Noise and Air Specialist  
Amy Dunay, Senior Environmental Planner / Archaeologist

### **SAN JOAQUIN COUNTY**

Michael Chung, P.E., Project Manager  
Joan Faustorilla, P.E., Project Engineer

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**Appendix A:**  
**NRCS-CPA-106 Form**

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United States  
Department of  
Agriculture

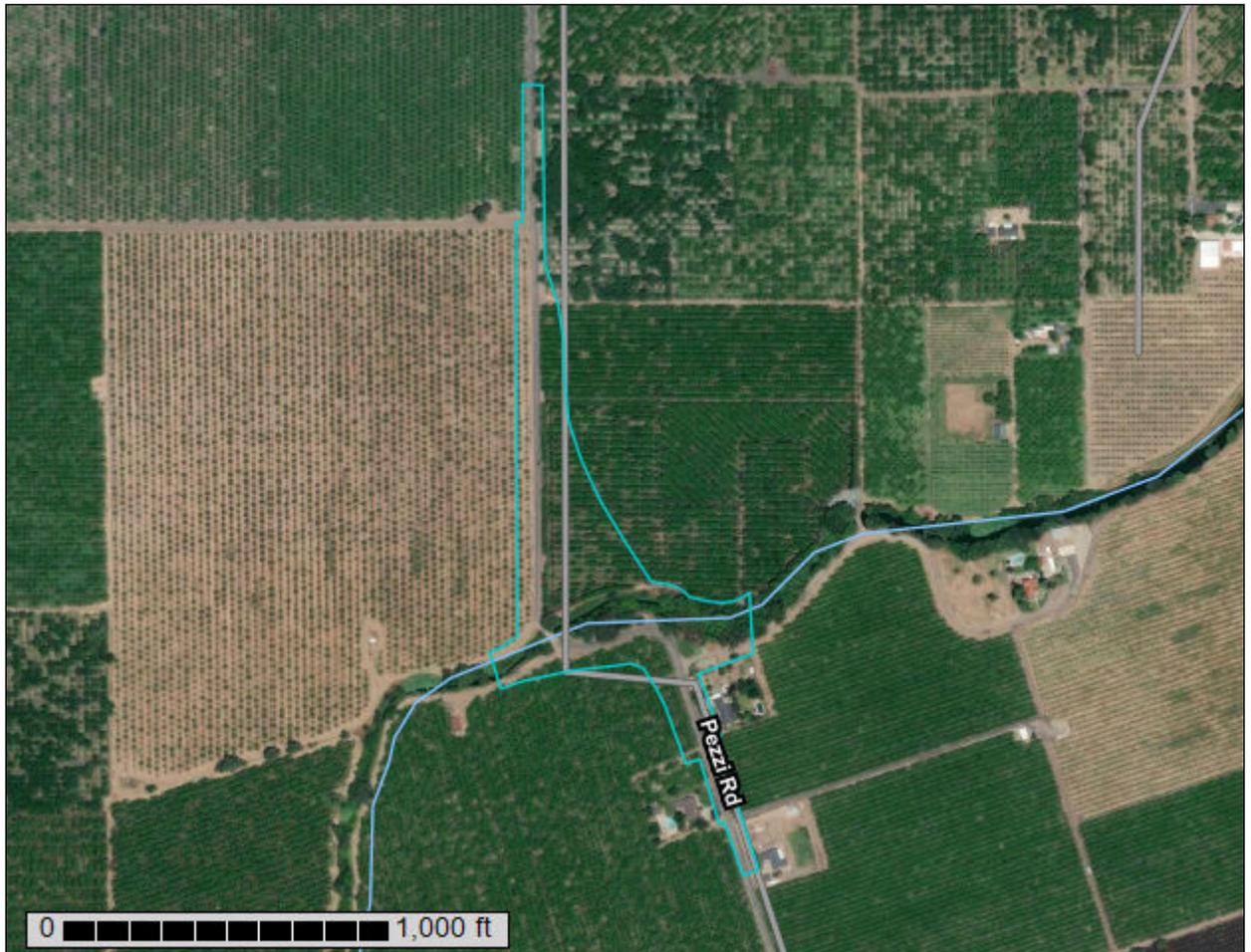
**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for San Joaquin County, California

## Pezzi Road Bridge Project



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

## Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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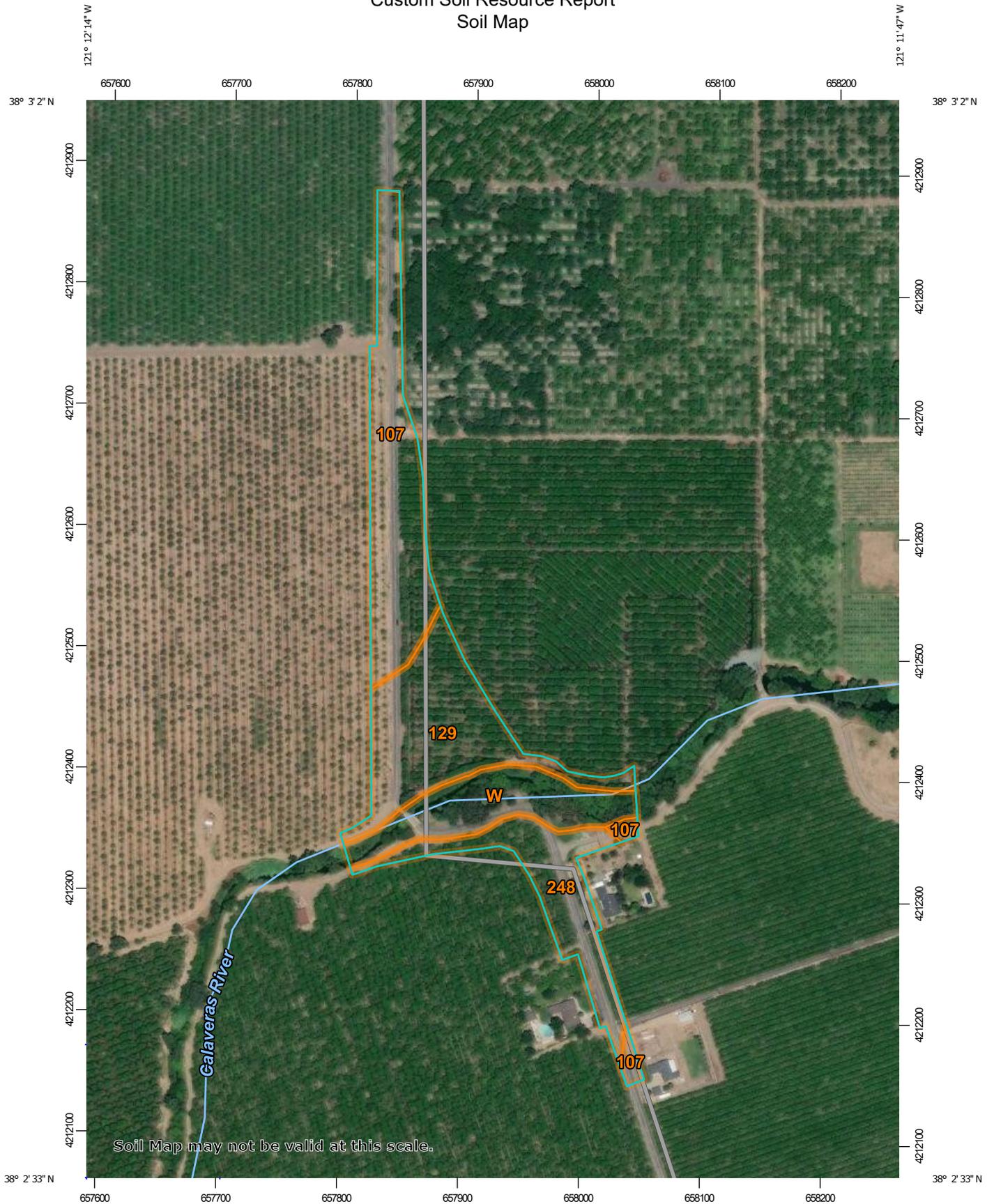
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

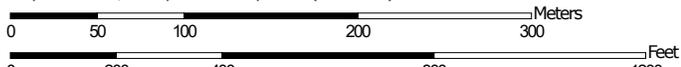
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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:4,330 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Joaquin County, California  
 Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 14, 2016—Oct 23, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
107	Archerdale clay loam, 0 to 2 percent slopes	3.6	32.1%
129	Cogna loam, 0 to 2 percent slopes	3.3	29.3%
248	Stockton fine sandy loam, 0 to 2 percent slopes, overwashed	2.2	19.2%
W	Water	2.2	19.4%
<b>Totals for Area of Interest</b>		<b>11.2</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

## Custom Soil Resource Report

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## San Joaquin County, California

### 107—Archerdale clay loam, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* hhr6  
*Elevation:* 40 to 130 feet  
*Mean annual precipitation:* 14 inches  
*Mean annual air temperature:* 61 degrees F  
*Frost-free period:* 270 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Archerdale and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Archerdale

##### Setting

*Landform:* Fan terraces  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium from mixed rock sources

##### Typical profile

*A - 0 to 8 inches:* clay loam  
*Bw1 - 8 to 35 inches:* clay  
*Bw2 - 35 to 60 inches:* clay

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 9.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 2s  
*Land capability classification (nonirrigated):* 4s  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

#### Minor Components

##### Cogna

*Percent of map unit:* 4 percent

*Hydric soil rating:* No

**Finrod**

*Percent of map unit:* 4 percent

*Hydric soil rating:* No

**Hollenbeck**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

**Vignolo**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

**Unnamed, steeper slopes**

*Percent of map unit:* 1 percent

*Hydric soil rating:* No

**129—Cogna loam, 0 to 2 percent slopes**

**Map Unit Setting**

*National map unit symbol:* hhrx

*Elevation:* 70 to 150 feet

*Mean annual precipitation:* 15 to 17 inches

*Mean annual air temperature:* 61 to 63 degrees F

*Frost-free period:* 230 to 250 days

*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

*Cogna, loam, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Cognia, Loam**

**Setting**

*Landform:* Alluvial fans

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Fine-loamy alluvium derived from igneous, metamorphic and sedimentary rock

**Typical profile**

*A - 0 to 25 inches:* loam

*Bk - 25 to 38 inches:* clay loam

*C - 38 to 64 inches:* loam

**Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

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*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Rare

*Frequency of ponding:* None

*Calcium carbonate, maximum in profile:* 2 percent

*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water storage in profile:* High (about 9.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* 1

*Land capability classification (nonirrigated):* 4c

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

### Minor Components

#### Archerdale

*Percent of map unit:* 6 percent

*Landform:* Stream terraces

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

#### Nord

*Percent of map unit:* 4 percent

*Landform:* Fan skirts

*Hydric soil rating:* No

#### Veritas

*Percent of map unit:* 3 percent

*Landform:* Fan remnants

*Hydric soil rating:* No

#### Columbia

*Percent of map unit:* 1 percent

*Landform:* Flood plains

*Hydric soil rating:* Yes

#### Honcut

*Percent of map unit:* 1 percent

*Landform:* Flood plains

*Hydric soil rating:* No

## 248—Stockton fine sandy loam, 0 to 2 percent slopes, overwashed

### Map Unit Setting

*National map unit symbol:* hhw

*Elevation:* 20 to 70 feet

## Custom Soil Resource Report

*Mean annual precipitation:* 14 inches  
*Mean annual air temperature:* 61 degrees F  
*Frost-free period:* 270 days  
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Stockton and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Stockton

#### Setting

*Landform:* Basin floors  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from mixed rock sources

#### Typical profile

*A - 0 to 16 inches:* fine sandy loam  
*2Ab - 16 to 53 inches:* clay  
*2Bk - 53 to 58 inches:* clay loam  
*2Bkqm - 58 to 60 inches:* cemented

#### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 40 to 60 inches to duripan  
*Natural drainage class:* Somewhat poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 in/hr)  
*Depth to water table:* About 60 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* Moderate (about 8.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2s  
*Land capability classification (nonirrigated):* 4s  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

### Minor Components

#### Archerdale

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Hollenbeck

*Percent of map unit:* 4 percent  
*Hydric soil rating:* No

#### Cogna

*Percent of map unit:* 4 percent

## Custom Soil Resource Report

*Hydric soil rating:* No

### **Unnamed, fine textured throughout soils**

*Percent of map unit:* 2 percent

*Hydric soil rating:* No

## **W—Water**

### **Map Unit Composition**

*Water:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

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**Appendix B:  
CNDDDB, USFWS, and CNPS Special Status  
Species Database Results**

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# Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



**Query Criteria:** Quad (Linden (3812111) OR Lockeford (3812122) OR Lodi North (3812123) OR Lodi South (3812113) OR Peters (3712181) OR Stockton East (3712182) OR Waterloo (3812112))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>An andrenid bee</b> <i>Andrena subapasta</i>	IIHYM35210	None	None	G1G2	S1S2	
<b>burrowing owl</b> <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
<b>California linderiella</b> <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
<b>California tiger salamander - central California DPS</b> <i>Ambystoma californiense pop. 1</i>	AAAAA01181	Threatened	Threatened	G2G3	S2S3	WL
<b>Crotch bumble bee</b> <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
<b>Delta button-celery</b> <i>Eryngium racemosum</i>	PDAPI0Z0S0	None	Endangered	G1	S1	1B.1
<b>foothill yellow-legged frog</b> <i>Rana boylei</i>	AAABH01050	None	Endangered	G3	S3	SSC
<b>giant gartersnake</b> <i>Thamnophis gigas</i>	ARADB36150	Threatened	Threatened	G2	S2	
<b>Greene's tuctoria</b> <i>Tuctoria greenei</i>	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
<b>legenere</b> <i>Legenere limosa</i>	PDCAM0C010	None	None	G2	S2	1B.1
<b>Mason's lilaepsis</b> <i>Lilaepsis masonii</i>	PDAPI19030	None	Rare	G2	S2	1B.1
<b>midvalley fairy shrimp</b> <i>Branchinecta mesovallensis</i>	ICBRA03150	None	None	G2	S2S3	
<b>Northern Hardpan Vernal Pool</b> <i>Northern Hardpan Vernal Pool</i>	CTT44110CA	None	None	G3	S3.1	
<b>pallid bat</b> <i>Antrozous pallidus</i>	AMACC10010	None	None	G4	S3	SSC
<b>recurved larkspur</b> <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<b>Sacramento splittail</b> <i>Pogonichthys macrolepidotus</i>	AFCJB34020	None	None	GNR	S3	SSC
<b>Sanford's arrowhead</b> <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
<b>song sparrow ("Modesto" population)</b> <i>Melospiza melodia</i>	ABPBXA3010	None	None	G5	S3?	SSC
<b>steelhead - Central Valley DPS</b> <i>Oncorhynchus mykiss irideus pop. 11</i>	AFCHA0209K	Threatened	None	G5T2Q	S2	



Selected Elements by Common Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>succulent owl's-clover</b> <i>Castilleja campestris</i> var. <i>succulenta</i>	PDSCR0D3Z1	Threatened	Endangered	G4?T2T3	S2S3	1B.2
<b>Suisun Marsh aster</b> <i>Symphotrichum lentum</i>	PDASTE8470	None	None	G2	S2	1B.2
<b>Swainson's hawk</b> <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
<b>tricolored blackbird</b> <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<b>valley elderberry longhorn beetle</b> <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S3	
<b>Valley Oak Woodland</b> <i>Valley Oak Woodland</i>	CTT71130CA	None	None	G3	S2.1	
<b>vernal pool fairy shrimp</b> <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
<b>vernal pool tadpole shrimp</b> <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G4	S3S4	
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>western spadefoot</b> <i>Spea hammondi</i>	AAABF02020	None	None	G2G3	S3	SSC
<b>yellow warbler</b> <i>Setophaga petechia</i>	ABPBX03010	None	None	G5	S3S4	SSC

Record Count: 30



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Sacramento Fish And Wildlife Office  
Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:  
Consultation Code: 08ESMF00-2021-SLI-2509  
Event Code: 08ESMF00-2021-E-07217  
Project Name: Pezzi Road Bridge Replacement Project

August 10, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

[http://www.nwr.noaa.gov/protected\\_species/species\\_list/species\\_lists.html](http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html)

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

<http://>

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

### **Sacramento Fish And Wildlife Office**

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
(916) 414-6600

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## Project Summary

Consultation Code: 08ESMF00-2021-SLI-2509

Event Code: 08ESMF00-2021-E-07217

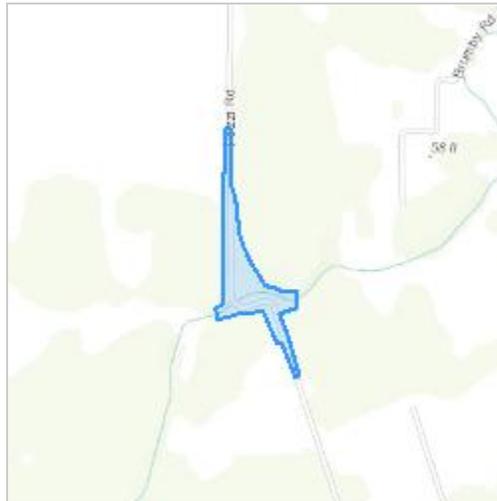
Project Name: Pezzi Road Bridge Replacement Project

Project Type: TRANSPORTATION

Project Description: Pezzi Road Bridge Replacement Project

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.04658,-121.20098792050412,14z>



Counties: San Joaquin County, California

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## Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

NAME	STATUS
Riparian Brush Rabbit <i>Sylvilagus bachmani riparius</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6189">https://ecos.fws.gov/ecp/species/6189</a>	Endangered

### Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4482">https://ecos.fws.gov/ecp/species/4482</a>	Threatened

### Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7850">https://ecos.fws.gov/ecp/species/7850</a>	Threatened

## Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a>	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered

## Flowering Plants

NAME	STATUS
Fleshy Owl's-clover <i>Castilleja campestris ssp. succulenta</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/8095">https://ecos.fws.gov/ecp/species/8095</a>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

## Inventory of Rare and Endangered Plants of California



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Search:

Simple

Advanced

Search for species and

Go

## Search Results

Back

Export Results

17 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3812112,3712182,3812113,3812111,3712183,3812122]

Scientific Name

Common Name

Family

Lifeform

Blooming Period

Fed List

State List

Global Rank

State Rank

CA Rare Plant Rank

General Habitats

Micro Habitats

Lowest Elevation

Highest Elevation

CA Endemic

Date Added

Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
<a href="#"><i>Astragalus tener</i></a> <a href="#"><i>var. tener</i></a>	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	No Photo Available
<a href="#"><i>Atriplex cordulata</i></a> <a href="#"><i>var. cordulata</i></a>	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	No Photo Available
<a href="#"><i>Blepharizonia plumosa</i></a>	big tarplant	Asteraceae	annual herb	Jul-Oct	None	None	G1G2	S1S2	1B.1	No Photo Available
<a href="#"><i>Brasenia schreberi</i></a>	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	G5	S3	2B.3	No Photo Available
<a href="#"><i>Castilleja campestris</i></a> <a href="#"><i>var. succulenta</i></a>	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	FT	CE	G4? T2T3	S2S3	1B.2	No Photo Available
<a href="#"><i>Centromadia parryi</i></a> <a href="#"><i>ssp. rudis</i></a>	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	No Photo Available
<a href="#"><i>Chloropyron palmatum</i></a>	palmate-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct	FE	CE	G1	S1	1B.1	No Photo Available
<a href="#"><i>Delphinium recurvatum</i></a>	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2	No Photo Available
<a href="#"><i>Extriplex joaquinana</i></a>	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	No Photo Available
<a href="#"><i>Hesperervax caulescens</i></a>	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>FAMILY</u>	<u>LIFEFORM</u> (emergent)	<u>BLOOMING PERIOD</u>	<u>FED LIST</u>	<u>STATE LIST</u>	<u>GLOBAL RANK</u>	<u>STATE RANK</u>	<u>PLANT RANK</u>	<u>RARE</u>	<u>No Photo Available</u>
<a href="#"><u>Hibiscus</u></a> <a href="#"><u>rustocarpus</u></a> var. <a href="#"><u>occidentalis</u></a>	woolly rose- mallow	Malvaceae	perennial rhizomatous herb	Jun-Sep	None	None	G5T3	S3	1B.2	CR	No Photo Available
<a href="#"><u>Lasthenia ferrisiae</u></a>	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2		No Photo Available
<a href="#"><u>Lathyrus jepsonii</u></a> var. <a href="#"><u>jepsonii</u></a>	Delta tule pea	Fabaceae	perennial herb	May- Jul(Aug- Sep)	None	None	G5T2	S2	1B.2		No Photo Available
<a href="#"><u>Lilaeopsis masonii</u></a>	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1		No Photo Available
<a href="#"><u>Sagittaria sanfordii</u></a>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May- Oct(Nov)	None	None	G3	S3	1B.2		No Photo Available
<a href="#"><u>Symphotrichum</u></a> <a href="#"><u>lentum</u></a>	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May- Nov	None	None	G2	S2	1B.2		No Photo Available
<a href="#"><u>Trifolium</u></a> <a href="#"><u>hydrophilum</u></a>	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2		No Photo Available

Showing 1 to 17 of 17 entries

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**Appendix C:**  
**Construction Air Quality Emissions Model**

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Pezzi Road Bridge Replacement Project														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.72	6.21	7.38	5.31	0.31	5.00	1.32	0.28	1.04	0.02	1,572.18	0.41	0.04	1,594.00
Grading/Excavation	2.54	20.86	26.42	6.10	1.10	5.00	2.01	0.97	1.04	0.05	5,325.92	1.48	0.10	5,391.29
Drainage/Utilities/Sub-Grade	2.50	24.00	24.11	6.04	1.04	5.00	2.00	0.96	1.04	0.05	4,999.12	0.98	0.07	5,045.01
Paving	0.79	10.81	7.59	0.40	0.40	0.00	0.34	0.34	0.00	0.02	2,002.48	0.47	0.06	2,032.56
Maximum (pounds/day)	2.54	24.00	26.42	6.10	1.10	5.00	2.01	0.97	1.04	0.05	5,325.92	1.48	0.10	5,391.29
Total (tons/construction project)	0.18	1.67	1.84	0.45	0.08	0.37	0.15	0.07	0.08	0.00	381.71	0.09	0.01	386.02

Notes:  
 Project Start Year -> 2023  
 Project Length (months) -> 8  
 Total Project Area (acres) -> 34  
 Maximum Area Disturbed/Day (acres) -> 1  
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd <sup>3</sup> /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	160	40
Grading/Excavation	10	0	30	0	680	40
Drainage/Utilities/Sub-Grade	0	0	0	0	560	40
Paving	0	15	0	30	400	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.  
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.  
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Pezzi Road Bridge Replacement Project														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.05	0.06	0.05	0.00	0.04	0.01	0.00	0.01	0.00	13.84	0.00	0.00	12.73
Grading/Excavation	0.09	0.73	0.93	0.21	0.04	0.18	0.07	0.03	0.04	0.00	187.47	0.05	0.00	172.16
Drainage/Utilities/Sub-Grade	0.08	0.74	0.74	0.19	0.03	0.15	0.06	0.03	0.03	0.00	153.97	0.03	0.00	140.97
Paving	0.01	0.14	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	26.43	0.01	0.00	24.34
Maximum (tons/phase)	0.09	0.74	0.93	0.21	0.04	0.18	0.07	0.03	0.04	0.00	187.47	0.05	0.00	172.16
Total (tons/construction project)	0.18	1.67	1.84	0.45	0.08	0.37	0.15	0.07	0.08	0.00	381.71	0.09	0.01	350.19

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.  
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.  
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.  
 The CO2e emissions are reported as metric tons per phase.



**Appendix D:**  
**FEMA FIRMette Map**

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# National Flood Hazard Layer FIRMette



38°2'56.28"N



USGS The National Map: Orthoimagery. Data refreshed April, 2019. 1:6,000 38°2'27.94"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                             |  |  |
|-----------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS  |  | Without Base Flood Elevation (BFE)<br><i>Zone A, V, A99</i>  |
|                             |  | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>   |
|                             |  | Regulatory Floodway  |
| OTHER AREAS OF FLOOD HAZARD |  | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
|                             |  | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>  |
|                             |  | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>  |
|                             |  | Area with Flood Risk due to Levee <i>Zone D</i>  |
| OTHER AREAS                 |  | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>   |
|                             |  | Effective LOMRs  |
| GENERAL STRUCTURES          |  | Area of Undetermined Flood Hazard <i>Zone D</i>  |
|                             |  | Channel, Culvert, or Storm Sewer   |
| OTHER FEATURES              |  | Levee, Dike, or Floodwall  |
|                             |  | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation<br>17.5  |
| MAP PANELS                  |  | Coastal Transect   |
|                             |  | Base Flood Elevation Line (BFE)  |
|                             |  | Limit of Study   |
|                             |  | Jurisdiction Boundary  |
|                             |  | Coastal Transect Baseline  |
|                             |  | Profile Baseline   |
|                             |  | Hydrographic Feature   |
|                             |  | Digital Data Available   |
|                             |  | No Digital Data Available  |
|                             |  | Unmapped   |

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/3/2019 at 7:03:34 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





# Appendix E:

## Distribution List

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A Notice of Availability was distributed to all residences within a 0.5-mile radius of the Project area and to the following agencies and interested parties (unless IS hardcopies specified).

San Joaquin County Department of Public Works  
Attn: Michael Chung, PE  
Project Manager  
San Joaquin County  
1810 East Hazelton Avenue  
Stockton, CA 95205  
(IS hardcopy)

### Federal Government

United States Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825

National Marine Fisheries Service  
5-100, 650 Capitol Mall  
Sacramento, CA 95814

US Army Corps of Engineers, Sacramento District  
ATTN: Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, CA 95814-2922

United States Coast Guard  
Eleventh Coast Guard District  
Coast Guard Island, Bldg. 50-2  
Alameda, CA 94501

### State Government

California State Clearinghouse  
P.O. Box 3044  
Sacramento, CA 95812-3044  
(IS hardcopy)

Central Valley Regional Water Quality Control Board  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670

California Department of Fish and Wildlife Region 4  
1234 E. Shaw Avenue  
Fresno, CA 93710

**Local Agencies**

San Joaquin County Clerk-Recorder  
44 N San Joaquin Street #260  
Stockton, CA 95202

Stockton East Water District  
6767 E Main Street  
Stockton, CA 95215

# **Appendix F:** **Mitigation Monitoring and Reporting Plan**

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**MITIGATION, MONITORING AND REPORTING PLAN (MMRP)**

Pezzi Road Bridge Replacement Project

San Joaquin County

October 2021

POTENTIAL IMPACT	MITIGATION MEASURE	TIMING	IMPLEMENTING PARTY	MONITORING PARTY	VERIFICATION (DATE AND INITIALS)
<b>AESTHETICS</b>					
Project implementation has the potential to impact aesthetic features.	<b>VIA-1:</b> Landscape architecture considerations shall be implemented as directed by the Department’s Highway Design Manual, Chapter 900, and the Department’s Landscape Architecture PS&E Guide. As such, highway planting, lighting plans, and aesthetic treatment would be incorporated into the Project as appropriate. This would also include coordination between the Department’s Landscape Architecture staff for areas within state right-of-way as well as with San Joaquin County.	Prior to and during construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact aesthetic features.	<b>VIA-2:</b> Caltrans Standard Specifications (2018) “Erosion Control” will be followed during construction. At the conclusion of construction, areas of bare soil shall be hydroseeded with native seed mix to prevent or at least minimize erosion. Hydroseeding will follow Standard Special Provision (SSP) 21-2.03D for Erosion Control (Hydroseed).	During and after construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact aesthetic features.	<b>VIA-3:</b> Vegetation clearing would only occur within the delineated Project boundaries in an effort to minimize the impacts. Trees located in areas along the edge of the construction zone would be trimmed whenever possible and only those trees that lie within the active construction areas would be removed.	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact aesthetic features.	<b>VIA-4:</b> All disturbed areas including staging of vehicles and equipment will be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.	After construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact aesthetic features.	<b>VIA-5:</b> Permanent impacts to riparian vegetation within construction limits will be mitigated for at an agency approved mitigation ratio at an on or off-site agency approved location or a combination of both.	Prior to construction activities	County	County	

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Project implementation has the potential to impact aesthetic features.	<b>VIA-6:</b> The contractor will be required to maintain good housekeeping in and around construction sites, staging areas, and equipment storage areas.	During construction activities	Construction Contractor	County/Construction Contractor	
<b>AIR QUALITY</b>					
Project implementation has the potential to impact air quality.	<b>AQ-1:</b> The construction contractor shall comply with Caltrans' Standard Specifications Section 14-11.04 Dust Control of Caltrans' Standard Specifications (2018).	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact air quality.	<b>AQ-2:</b> The construction contractor shall comply with Section 7-1.02C Emissions Reduction and Section 18 Dust Palliative of Caltrans' Standard Specifications (2018).	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact air quality.	<b>AQ-3:</b> The Wind Erosion Control BMP (WE-1) from Caltrans' Construction Site <i>Best Management Practices Manual</i> will be implemented as follows: <ul style="list-style-type: none"> <li>• Water shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.</li> <li>• All distribution equipment shall be equipped with a positive means of shutoff.</li> <li>• Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the Project.</li> <li>• If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board (RWQCB) requirements. Non-potable water shall not be conveyed in tanks or drainpipes that will be used to convey potable water and there shall be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances shall be marked "NON-POTABLE WATER – DO NOT DRINK."</li> <li>• Materials applied as temporary soil stabilizers and soil binders will also provide wind erosion control benefits.</li> </ul>	During construction activities	Construction Contractor	County/Construction Contractor	

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<b>BIOLOGICAL RESOURCES</b>					
Project implementation has the potential to impact special status aquatic/semi-aquatic and terrestrial species.	<b>BIO-1:</b> All construction personnel shall be provided with environmental awareness training prior to being allowed to work on the job site. The training shall include an overview of sensitive habitats and special-status species that are present within or adjacent to the Project area and Project specific protective measures that must be adhered to. The training will also include a description of the legal penalties for violating protective measures.	Prior to and during construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact stormwater.	<b>BIO-2:</b> Contract specifications will include the following BMPs, where applicable, to reduce erosion during construction: <ul style="list-style-type: none"> <li>• Implementation of the Project will require approval of a site-specific Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.</li> <li>• Existing vegetation will be protected in place where feasible to provide an effective form of erosion and sediment control.</li> <li>• Stabilizing materials will be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities.</li> </ul>	Prior to and during construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>BIO-3:</b> In channel work shall be limited to periods of low flow. If water is present within the channel during construction, a water diversion will be implemented. The water diversion will be designed and implemented by the contractor selected for this Project.	Prior to and during construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>BIO-4:</b> Refueling or maintenance of equipment shall not be permitted within the Old Calaveras River (Riverine) and must occur at least 25 feet from the top of bank. All onsite refueling and maintenance must occur over plastic sheeting, drip pans, or other secondary containment measures to capture accidental spills before they	During construction activities	Construction Contractor	County/Construction Contractor	

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	can contaminate the soil. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).				
Project implementation has the potential to impact water resources.	<b>BIO-5:</b> A chemical spill kit must be kept onsite at all times during work and must be easily accessible for use in the event of a spill.	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>BIO-6:</b> Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or the Old Calaveras River (Riverine). Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies	<b>BIO-7:</b> The Calaveras River riparian corridor shall be established as an ESA. Prior to ground disturbance, the Project limits adjacent to riparian vegetation shall be marked off with high visibility orange fencing (ESA Fencing) to prevent further encroachment into the ESA. Construction equipment, materials, and personnel shall not be permitted beyond the ESA fencing.	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-8:</b> Native tree removal shall be limited to the minimum amount necessary for equipment access through the Project area. Trees shall be preferentially trimmed rather than removed and trimming should not exceed 30% of the total canopy of each tree.	Prior to construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-9:</b> Following construction, the Project area shall be re-graded to pre-construction or better conditions and hydroseeded with a mix of regionally appropriate native species approved by the Project biologist.	After construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact special status aquatic/semi-	<b>BIO-10:</b> The County will purchase mitigation bank credits from a CDFW approved mitigation bank. The County anticipates purchasing credits at a 3:1 ratio for permanent impacts and at a 1:1 ratio for temporary impacts but final mitigation ratios and	Prior to construction activities	County	County	

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aquatic and terrestrial species.	credits will be determined in coordination with CDFW through the 1602 permitting process, and through the USACE/RWQCB during the 404/401 permitting process.				
Project implementation has the potential to impact special status terrestrial species.	<p><b>BIO-11:</b> Prior to vegetation removal or initial ground disturbance during the nesting bird season (February 1<sup>st</sup> – September 30<sup>th</sup>) a pre-construction nesting bird survey must be conducted by a Project biologist prior to the start of work. The nesting bird survey must include the Project area plus a 300-foot buffer. Within 2 weeks of the nesting bird survey, all areas surveyed by the biologist must be cleared by the contractor or a supplemental nesting bird survey is required.</p> <p>A minimum 300-foot no work buffer will be established around any active nests of a raptor species. A 100-foot no work buffer will be established around any active nests for other migratory birds. If an active nest is discovered during construction, the contractor must immediately stop work in the nesting area until the appropriate buffer is established. If a Swainson’s hawk nest is observed during the pre-construction survey, a 600-foot buffer will be established and CDFW will be contacted for further guidance. The contractor is prohibited from conducting work that could disturb the birds (as determined by a Project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by a Project biologist and approved by CDFW.</p>	Prior to and during construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact special status aquatic/semi-aquatic species.	<p><b>BIO-12:</b> If water is present at the start of in channel work, prior to installing the water diversion, the Project biologist(s) will remove fish from the work area. This may be accomplished by dip netting or seine netting as determined by the Project biologist(s). Handling of salmonids is not anticipated; however, if this action is necessary, the County will contact Caltrans in coordination with NMFS and consultation may need to be re-initiated.</p>	Prior to construction activities	County/Construction Contractor	County/Construction Contractor	

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Project implementation has the potential to impact water resources.	<b>BIO-13:</b> Silt fences and fiber rolls should be utilized to reduce potential sediment discharge that could impact water quality.	During construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-14:</b> Prior to initiating construction, elderberry shrubs that cannot be avoided will be removed and transplanted to a USFWS approved mitigation bank. Relocation must be completed between December 15 <sup>th</sup> and February 15 <sup>th</sup> when elderberry shrubs are dormant to minimize transplant stress on the shrubs. Transplanting methods must follow the recommendations included in Section 5.2 of the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (USFWS 2017) or more recent published USFWS recommendations. The Project biologist will be present onsite during shrub relocation.	Prior to construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-15:</b> Prior to construction, during transplantation of elderberry shrubs, the Project biologist will conduct a survey of the Project area to ensure that no new shrubs, with stems 1 inch or greater, have appeared since the original survey. If new shrubs, with stems 1 inch or greater, are discovered that may be impacted by the Project coordination with USFWS will occur.	Prior to construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-16:</b> Elderberry shrubs adjacent to the Project limits will be protected in place. ESA fencing will be placed around the dripline of elderberry shrubs and protective sheeting will be used to block construction dust and debris.	Prior to construction activities	Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat, tree preservation policies, and special status terrestrial species.	<b>BIO-17:</b> A qualified biologist will be present onsite for any elderberry shrub removal and will periodically inspect the construction area and ESA fencing to ensure that no unauthorized take of VELB occurs.	Prior to and during construction activities	County/Construction Contractor	County/Construction Contractor	

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<p>Project implementation has the potential to impact riparian habitat, tree preservation policies, and special status terrestrial species.</p>	<p><b>BIO-18:</b> Signs will be installed along the edge of the ESA and will read the following: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.</p>	<p>Prior to construction activities</p>	<p>Construction Contractor</p>	<p>County/Construction Contractor</p>	
<p>Project implementation has the potential to impact riparian habitat, tree preservation policies, and special status terrestrial species.</p>	<p><b>BIO-19:</b> Herbicides, insecticides, fertilizers, or other chemicals that might harm the VELB or VELB's host plant will not be used within 100 feet of elderberry shrubs. All chemicals will be applied using a backpack sprayer or a similar direct application method.</p>	<p>During construction activities</p>	<p>Construction Contractor</p>	<p>County/Construction Contractor</p>	
<p>Project implementation has the potential to impact riparian habitat, tree preservation policies, and special status terrestrial species.</p>	<p><b>BIO-20:</b> To prevent fugitive dust from drifting into adjacent habitat, all clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, demolition activities, or other dust generating activities will be effectively controlled for fugitive dust emissions utilizing application of water or by presoaking.</p>	<p>During construction activities</p>	<p>Construction Contractor</p>	<p>County/Construction Contractor</p>	
<p>Project implementation has the potential to impact special status terrestrial species.</p>	<p><b>BIO-21:</b> Prior to the start of construction, the County will purchase 6.7 mitigation credits for VELB from a USFWS approved mitigation bank.</p>	<p>Prior to construction activities</p>	<p>County</p>	<p>County</p>	
<p>Project implementation has the potential to impact special status terrestrial species.</p>	<p><b>BIO-22:</b> If demolition of the existing bridge is planned to occur during the swallow nesting season, measures must be taken to avoid impacts to migratory swallows. To protect migratory swallows, unoccupied nests must be removed from the existing bridge and swallow exclusions must be installed prior to the nesting season (February 15<sup>th</sup> – September 30<sup>th</sup>). Swallow exclusion design is at the discretion of the contractor but may consist of netting, sheeting, or low friction coatings. If a swallow is allowed to</p>	<p>Prior to construction activities</p>	<p>County/Construction Contractor</p>	<p>County/Construction Contractor</p>	

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	complete a nest on the existing bridge, work may not resume on the bridge without written approval from CDFW or until the Project biologist has determined that the young have fledged, and the nest is empty.				
Project implementation has the potential to impact special status terrestrial species.	<b>BIO-23:</b> Erosion control materials that incorporate plastic monofilament netting are not permitted within the Project area.	During construction activities	Construction Contractor	County/Construction Contractor	
<b>NMFS CONSERVATION RECOMMENDATIONS</b>					
Project implementation has the potential to impact special status aquatic/semi-aquatic species.	<b>BIO-24:</b> In coordination with NMFS, if a temporary water diversion is determined to be needed, then Caltrans shall develop a plan that describes: (1) how a temporary diversion structure will be installed, and uninstalled, in the action area within the Old Calaveras River channel, including any relevant designs; (2) how dewatering will occur in the work area; (3) protocols for how, and where, fish will be relocated, including conservation measures that would reduce the potential for fish injury and mortality; and (4) communication protocols for how to notify NMFS in the event that a temporary diversion structure needs to be installed, and dewatering and fish relocation activities need to occur. Caltrans shall submit the plan to NMFS for review and approval a minimum of 30 days prior to installation of a temporary diversion structure within the Old Calaveras River channel.	Prior to construction activities	Caltrans/County	Caltrans/County	
Project implementation has the potential to impact special status aquatic/semi-aquatic species.	<b>BIO-25:</b> Caltrans shall notify NMFS within 24 hours if CCV steelhead are observed, encountered, or relocated during fish relocation activities.	During construction activities	Caltrans/County/Construction Contractor	Caltrans/County/Construction Contractor	
Project implementation has the potential to impact special status aquatic/semi-aquatic species.	<b>BIO-26:</b> If a temporary diversion structure is installed and fish relocation activities occur, then within 60 days after completion of fish relocation activities and removal of the temporary diversion structure, Caltrans shall submit a report to NMFS that describes and summarizes fish relocation activities. This report shall include a description	During and after construction activities	Caltrans/County	Caltrans/County	

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	of the conservation measures that were implemented to reduce the potential for fish injury and mortality, and summarize all the fish species that were observed, encountered, and relocated.				
Project implementation has the potential to impact special status aquatic/semi-aquatic species.	<b>BIO-27:</b> San Joaquin County will purchase credits from approved banks for impacts to riparian habitat at a 3:1 ratio for permanent impacts, and a 1:1 ratio for temporary impacts. Potential banks include Bullock Bend Mitigation Bank and Fremont Landing Conservation Bank.	Prior to construction activities	County	County	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-28:</b> Caltrans should protect existing, and wherever practicable, establish new riparian vegetation to enhance shading, cover, terrestrial food supply, and supply of instream woody material.	During construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>BIO-29:</b> Caltrans should require contractors to use biodegradable lubricants and hydraulic fluid in construction machinery entering the Old Calaveras River channel. The use of petroleum alternative can greatly reduce the risk of contaminants from entering the aquatic ecosystem.	During construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact riparian habitat and tree preservation policies.	<b>BIO-30:</b> Bank erosion control should use vegetation methods or "soft" approaches (such as vegetative plantings and placement of woody material) to shoreline modifications whenever feasible. Hard bank protection should be a last resort and the following options should be explored: tree revetments, stream flow deflectors, and vegetative riprap.	During construction activities	County/Construction Contractor	County/Construction Contractor	
<b>CULTURAL RESOURCES</b>					
Construction and ground-disturbing activities may encounter historical, archaeological, and/or paleontological resources.	<b>CR-1:</b> If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find and develop a plan for documentation and removal of resources if necessary. Additional archaeological survey will be needed if Project limits are extended beyond the present survey limits.	During construction activities	County/Construction Contractor	County/Construction Contractor	

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<p>Construction and ground-disturbing activities may encounter historical, archaeological, and/or paleontological resources.</p>	<p><b>CR-2:</b> Section 5097.94 of the PRC and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the county coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the NAHC within twenty-four hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.</p>	<p>During construction activities</p>	<p>County/Construction Contractor</p>	<p>County/Construction Contractor</p>	
<p><b>GREENHOUSE GAS EMISSIONS</b></p>					
<p>Construction and demolition activities would generate temporary greenhouse gas emissions.</p>	<p><b>GHG-1:</b> According to the Caltrans' Standard Specification Section 14-9.02, the contractor must comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231).</p>	<p>During construction activities</p>	<p>Construction Contractor</p>	<p>County/Construction Contractor</p>	
<p><b>HAZARDS AND HAZARDOUS MATERIALS</b></p>					
<p>Construction activities involve reasonably foreseeable upset and accident conditions that may subject the public and environment to the release of hazardous materials.</p>	<p><b>HAZ-1:</b> There is a potential that the proposed Project could affect yellow thermoplastic pavement markings and other types or colors of street or municipal markings containing lead-based paint. If such markings are affected as a result of the Project, samples will be collected, tested, and/or disposed of in accordance with applicable regulations. Therefore, to avoid impacts from pavement striping during construction, it is recommended that testing and removal requirements for yellow striping and pavement marking materials be performed in accordance with Caltrans SSPs for removing traffic stripes and pavement markings.</p>	<p>Prior to and During construction activities</p>	<p>County/Construction Contractor</p>	<p>County/Construction Contractor</p>	
<p>Construction activities involve reasonably</p>	<p><b>HAZ-2:</b> Any leaking transformers observed during the course of the Project should be considered a potential polychlorinated biphenyl (PCB) hazard.</p>	<p>Prior to construction activities</p>	<p>County/Construction Contractor</p>	<p>County/Construction Contractor</p>	

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foreseeable upset and accident conditions that may subject the public and environment to the release of hazardous materials.	A detailed inspection of individual electrical transformers was not conducted for this ISA. However, should leaks from electrical transformers (that will either remain within the construction limits or will require removal and/or relocation) be encountered during construction, the transformer fluid should be sampled and analyzed by qualified personnel for detectable levels of PCB's. Should PCBs be detected, the transformer should be removed and disposed of in accordance with Title 22, Division 4.5 of the California Code of Regulations and any other appropriate regulatory agency. Any stained soil encountered below electrical transformers with detectable levels of PCB's should also be handled and disposed of in accordance with Title 22, Division 4.5 of the California Code of Regulations and any other appropriate regulatory agency.				
Construction activities involve reasonably foreseeable upset and accident conditions that may subject the public and environment to the release of hazardous materials.	<b>HAZ-3:</b> As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during Project construction. For any previously unknown hazardous waste/ material encountered during construction, the procedures outlined in Appendix E (Caltrans Unknown Hazard Procedures) shall be followed.	During construction activities	County/Construction Contractor	County/Construction Contractor	
<b>HYDROLOGY AND WATER QUALITY</b>					
Project implementation has the potential to impact water resources.	<b>WQ-1:</b> BMPs will be incorporated into Project design and Project management to minimize impacts on the environment including the release of pollutants (oils, fuels, etc.): <ul style="list-style-type: none"> <li>• The area of construction and disturbance would be limited to as small an area as feasible to reduce erosion and sedimentation.</li> <li>• Measures would be implemented during land-disturbing activities to reduce erosion and sedimentation. These measures may include mulches, soil binders and erosion control blankets, silt fencing, fiber rolls, temporary berms, sediment desilting basins, sediment traps, and check dams.</li> </ul>	Prior to and during construction activities	County/Construction Contractor	County/Construction Contractor	

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	<ul style="list-style-type: none"> <li>• Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around areas to be protected.</li> <li>• Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.</li> <li>• Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.</li> <li>• All construction roadway areas would be properly protected to prevent excess erosion, sedimentation, and water pollution.</li> <li>• All vehicle and equipment maintenance procedures would be conducted off-site. In the event of an emergency, maintenance would occur away from the Calaveras River.</li> <li>• All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.</li> <li>• All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered, as feasible.</li> <li>• Energy dissipaters and erosion control pads would be provided at the bottom of slope drains. Other flow conveyance control mechanisms may include earth dikes, swales, or ditches. Stream bank stabilization measures would also be implemented.</li> <li>• All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state.</li> <li>• All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native or approved non-invasive exotic species.</li> </ul>				
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	<ul style="list-style-type: none"> <li>All construction materials would be hauled off-site after completion of construction.</li> </ul>				
Project implementation has the potential to impact water resources.	<b>WQ-2:</b> Any requirements for additional avoidance, minimization, and/or mitigation measures will be adhered to from all required regulatory agencies.	Prior to, during, and after construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>WQ-3:</b> The Project limits in proximity to the Calaveras River will be marked as an ESA or either be staked or fenced with high visibility material to ensure construction activities will not encroach further beyond established limits.	Prior to construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>WQ-4:</b> The construction contractor will adhere to the SWRCB Order No. 2012-0006-DWQ NPDES Permit pursuant to Section 402 of the CWA. This permit authorizes storm water and authorized non-storm water discharges from construction activities. As part of this Permit requirement, a SWPPP or Water Pollution Control Plan (if ground disturbance is less than 1 acre) will be prepared prior to construction consistent with the requirements of the RWQCB. This SWPPP/Water Pollution Control Plan will incorporate all applicable BMPs to ensure that adequate measures are taken during construction to minimize impacts to water quality.	Prior to construction activities	County/Construction Contractor	County/Construction Contractor	
Project implementation has the potential to impact water resources.	<b>WQ-5:</b> Storm water systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources.	Prior to construction activities	County	County	
<b>NOISE</b>					
Construction and demolition activities would generate temporary ambient and ground borne noise.	<b>NOI-1:</b> To minimize the construction-generated noise, abatement measures from Standard Specification 14-8.02 "Noise Control" and SSP 14-8.02 must be followed: <ul style="list-style-type: none"> <li>Do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.</li> <li>Equip an internal combustion engine with the manufacturer recommended muffler.</li> </ul>	During construction	Construction Contractor	County/Construction Contractor	

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	<ul style="list-style-type: none"> <li>Do not operate an internal combustion engine on the job site without the appropriate muffler.</li> </ul>				
<b>TRANSPORTATION/TRAFFIC</b>					
Construction and demolition activities would generate temporary traffic impacts.	<b>TRA-1:</b> Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.	Prior to and during construction	County/Construction Contractor	County/Construction Contractor	

