# Merced 140 Roadside Safety Improvements

On State Route 140 in Merced County
10-MER-140-2.3/49.0
EA 10-0Y130 and Project ID 1013000243
SCH Number 2019059129

## Initial Study
## with Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

**April 2020**

Caltrans

# General Information About This Document

The California Department of Transportation (Caltrans) prepared this Initial Study with Mitigated Negative Declaration for the proposed project in Merced County. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

The Initial Study with Proposed Mitigated Negative Declaration circulated to the public for 30 days between May 31, 2019, and June 29, 2019. Comments received during this period are included in Appendix C.

If you would like a printed version or CD of this document, contact Cassidy Ellis by phone at 559-445-6481 or by email at cassidy.ellis@dot.ca.gov. The document can also be downloaded at the following website: https://dot.ca.gov/d10/projects.html

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the chapters and appendices.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attention: Jennifer Lugo, Environmental Planning, 855 M Street, Suite 200, Fresno, California 93720; 559-445-6172 (Voice), or use the California Relay Service 1-800-735-2929 (TTY), 1-800-735-2929 (Voice), or 711.

SCH Number 2019059129
10-MER-140-2.3/49.0
EA 10-0Y130 and Project ID Number 1013000243

Extend culverts, install guardrail, and reconstruct headwalls at
12 locations on State Route 140 from post miles 2.3 to 49.0 in Merced County

# INITIAL STUDY
# with Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agencies: California Transportation Commission

Philip Vallejo

Philip Vallejo
Environmental Office Chief, North
California Department of Transportation
NEPA Lead Agency and CEQA Lead Agency

4/22/2020
Date

The following individual may be contacted for more information about this document:
Jennifer Lugo, Senior Environmental Planner
Northern San Joaquin Valley Management Branch 1
855 M Street, Suite 200
Fresno, California 93721
559-445-6172

# Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

***Project Description***

The California Department of Transportation (Caltrans) will extend culverts, build headwalls, and install guardrail systems at 12 locations on State Route 140 from post miles 2.3 to 49.0 in Merced County.

***Determination***

Caltrans has prepared an Initial Study for this project and, following 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 effect on air quality, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, or wildfire.

The project would have less than significant effects to aesthetics, agriculture, greenhouse gas emissions, relocations and real property acquisition, utilities and emergency services, and invasive species.

With the following mitigation measures incorporated, the project would have less than significant effects to biological resources.

- For Threatened and Endangered Species—conduct pre-construction surveys, biological monitoring during construction, worker environmental awareness training for construction staff, purchase conservation bank credits for the giant garter snake and fairy shrimp and install environmentally sensitive area fencing.
- For Wetlands and Other Waters—purchase bank credits, establish new habitat by purchasing mitigation land, require Best Management Practices, require an emergency spill plan, and conduct pre-construction worker environmental awareness training.
- For Natural Communities—Replant 10 oak trees on-site at locations 6 and 4 for every tree removed. The trees would be maintained and monitored.
- Conduct pre-construction botanical surveys.
- Conduct pre-construction migratory bird surveys.

Philip Vallejo

Philip Vallejo
Environmental Office Chief, North
California Department of Transportation
NEPA Lead Agency and CEQA Lead Agency

4/22/2020
Date

# Table of Contents

# List of Figures



# List of Tables

# Chapter 1 Proposed Project

## 1.1 Introduction

The Merced State Route 140 Roadside Safety Improvements project will reconstruct headwalls, extend culverts, and remove and install bridge-approach guardrail at 12 locations along State Route 140 near the city of Gustine and the census-designated town of Planada. The project runs from post miles 2.3 to 49.0 in Merced County (see Figures 1-1 and 1-2). Within the project limits, State Route 140 is a conventional two-lane highway with 12-foot lanes. The width of the paved shoulder varies from 4 feet to 1 foot throughout the project limits. The width of the right-of-way varies between 60 feet and 100 feet.

The project is programmed in the 2016 State Highway Operations and Protection Program under the 20.20.201.015 Clean-Up the Roadside Environment Program, which is an element of the Collision Severity Reduction Program. The project is slated for construction funding in the 2021/2022 fiscal year.

## 1.2 Purpose and Need

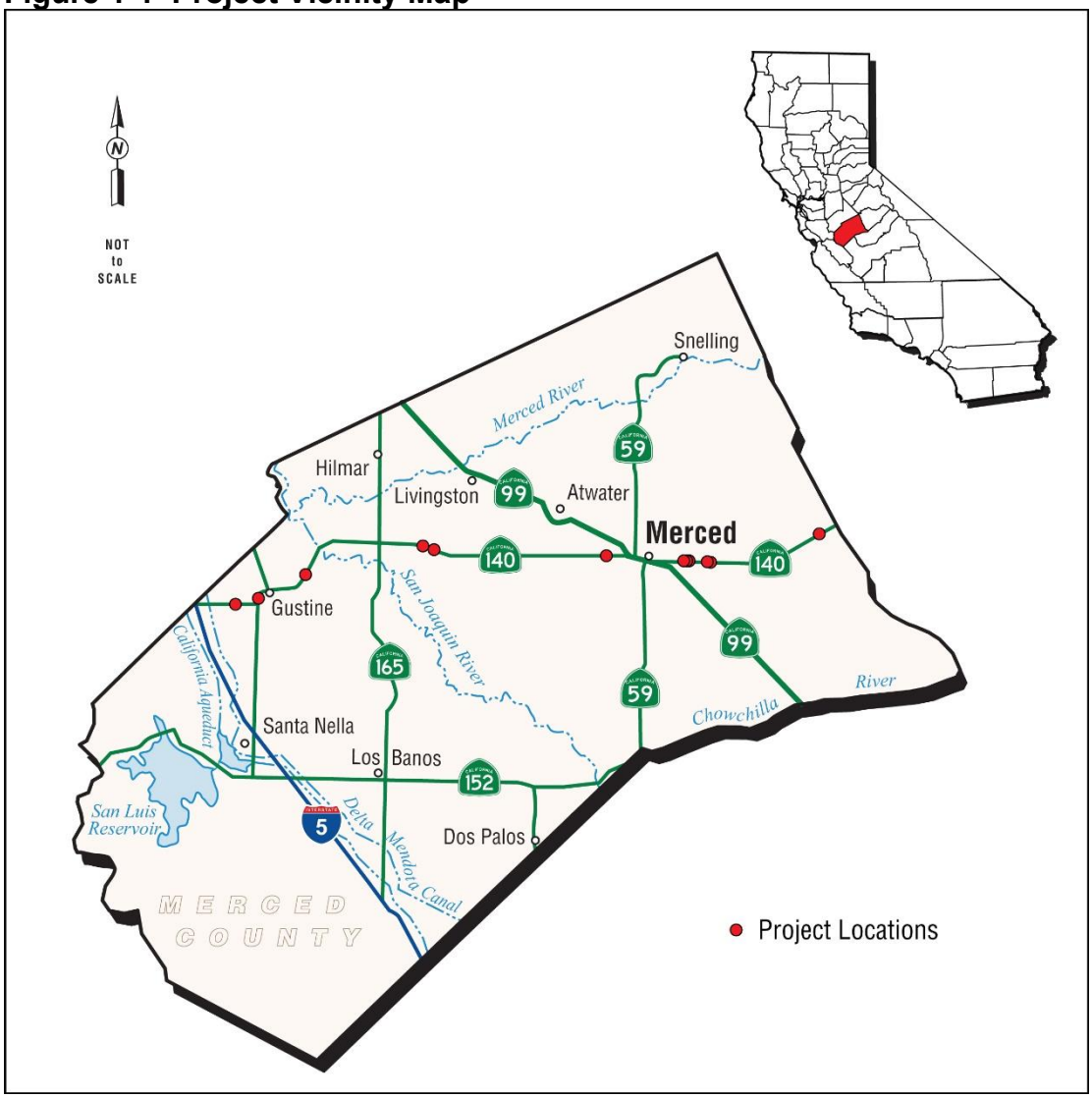
### 1.2.1 Purpose

The purpose of the project is to reduce collisions and minimize collision severity involving errant vehicles leaving the traveled way and striking fixed objects.

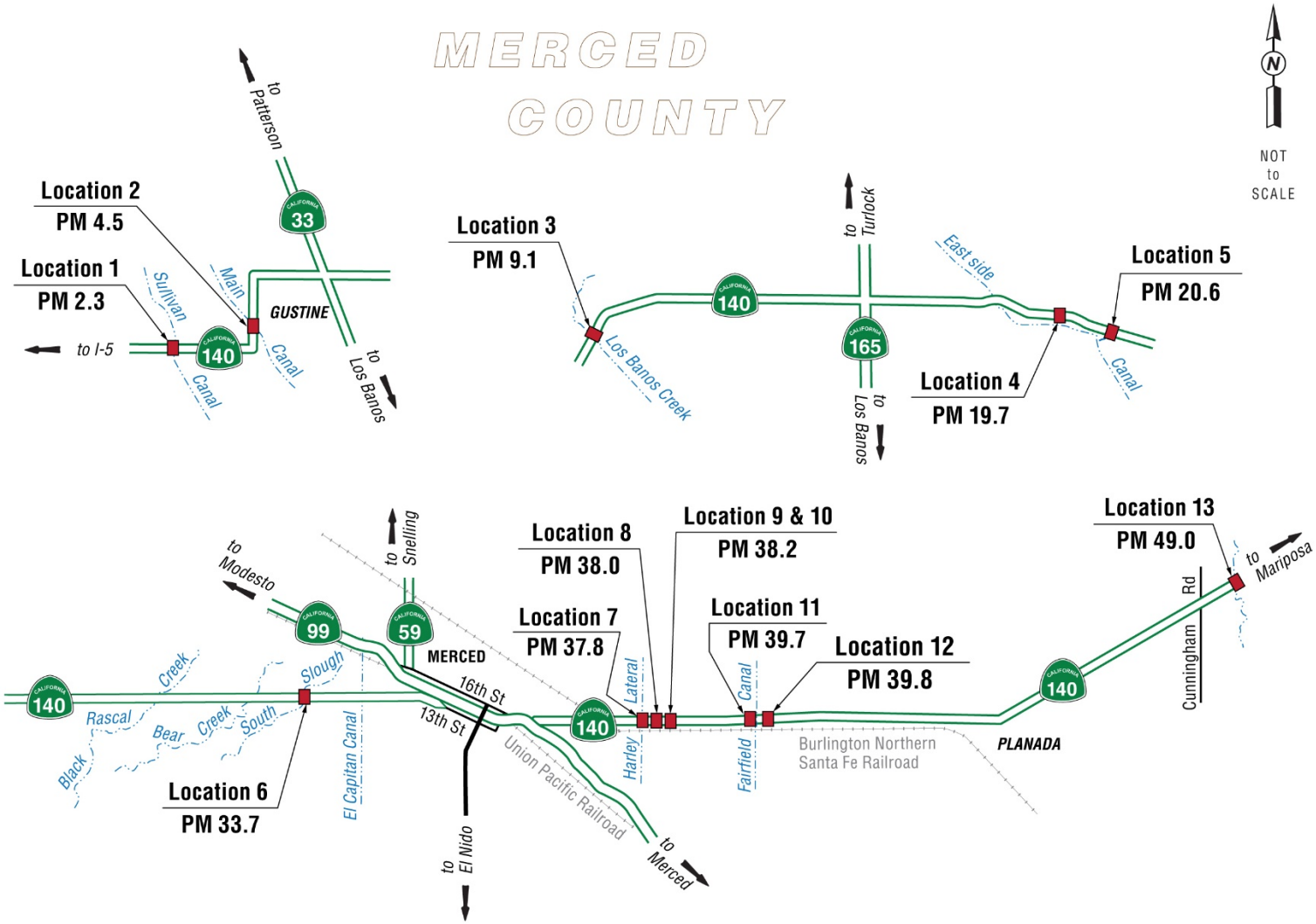
### 1.2.2 Need

The project is needed because fixed objects, such as culvert headwalls, are within the clear recovery zone. Relocating headwalls outside the clear recovery zone would decrease the potential and minimize the severity of collisions.

**Figure 1-1 Project Vicinity Map**



## Figure 1-2 Project Location Map



### 1.2.3 Project Description

Caltrans would extend culverts, remove and reconstruct headwalls outside of the clear recovery zone, and add new bridge-approach guardrail at 12 locations from post miles 2.3 to 49.0 on State Route 140 near the city of Gustine and the census-designated town of Planada.

## 1.3 Project Alternatives

Two alternatives are under consideration: the Build Alternative and the No-Build (No-Action) Alternative.

### 1.3.1 Build Alternative

The project would extend culverts, replace existing bridge-approach guardrail with new Midwest Guardrail Systems, and remove and reconstruct headwalls outside the clear recovery zone. Below is a description of the work at each of the project locations.

Location 10 was dropped from the project during the project development process. See Section 1.4 Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Document for more information.

The following text about locations 1 and 2 has been added since the draft environmental document:

- Location 1 (PM 2.3)—A new Midwest Guardrail System would be built, and service roads would be realigned. A temporary water diversion plan is not required. Work is not expected to occur in the channel. Permanent right-of-way easements would be required. Seven agricultural trees would be removed.
- Location 2 (PM 4.5)—A new Midwest Guardrail System would be built, and service roads would be realigned. A temporary water diversion plan is not required. Work is not expected to occur in the channel. Permanent right-of-way easements would be required. Construction activities at this location may require the removal of one tree.
- Location 3 (PM 9.1)—A new Midwest Guardrail System would be built. Additional fill (embankment) is required next to the existing shoulder for the Midwest Guardrail System. All work would be completed within the existing right-of-way. A temporary water diversion plan is not required. Work is not expected to occur in the channel. No trees would be removed.
- Location 4 (PM 19.7)—The culvert would be extended by about 8.3 feet on the eastbound side and 12.5 feet on the westbound side. New concrete headwalls are proposed at the outlet. Additional fill (embankment) is required next to the existing shoulder to provide a smooth transition to the

culvert extension. All work would be completed within the existing right-of-way. A temporary water diversion plan is not required, but there would be work in the channel. Two trees on the northwest side of the culvert would be removed (revised from 7 trees in the draft environmental document).

- Location 5 (PM 20.6)—The culvert would be extended by about 6.3 feet on the eastbound side and 9.2 feet on the westbound side. New concrete headwalls are proposed at the outlet. Additional fill (embankment) is required next to the existing shoulder to provide a smooth transition to the culvert extension. Additional right-of-way acquisition and a temporary construction easement are required. A temporary water diversion plan is not required, but there would be work in the channel. No trees would be removed.
- Location 6 (PM 33.7)—The culvert would be extended by about 10.7 feet on the eastbound side and 12.1 feet on the westbound side. New concrete headwalls are proposed at the outlet. Storm drain manholes would be installed at the skewed culvert connections. Additional fill (embankment) is required next to the culvert extension. Additional right-of-way acquisition and temporary construction easements are required. A temporary water diversion plan is not required, but there would be work in the channel. Some oleander bushes on the southwest side bank would be removed. One Oak tree on the southeast bank of the canal would be removed (revised from two trees in the draft environmental document).
- Location 7 (PM 37.8)—The culvert would be extended by about 2.5 feet on the eastbound side and 13.1 feet on the westbound side. New concrete headwalls and concrete barriers are proposed at the outlet. The Midwest Guardrail System would be built in the eastbound direction. Additional fill (embankment) is required next to the proposed culvert extension. A temporary construction easement is required. A temporary water diversion plan is not required, but there would be work in the channel. Branches of one eucalyptus tree on the southeast side of the channel would be trimmed (revised from two eucalyptus trees in the draft environmental document).
- Location 8 (PM 38.0)—The culvert would be extended by about 2.7 feet on the eastbound side and 15.7 feet on the westbound side. New concrete headwalls and barriers are proposed. The Midwest Guardrail System would be built in the eastbound direction. Additional fill (embankment) is required next to the culvert extension. A temporary construction easement is required. A temporary water diversion plan is not required, but there would be work in the channel. No trees would be removed.
- Location 9 (PM 38.0)—The guardrail would be reconstructed. All work would be completed within the right-of-way. A water diversion plan is not required. No trees would be removed.
- Location 11 (PM 39.7)—Merced Irrigation District would perform the work. The district's facility would be extended by 20 feet, and there would be

work in the channel. No tree removal would occur. No right-of-way acquisition is required. Work at this location would be performed by the Merced Irrigation District under a service contract/agreement.

- Location 12 (PM 39.8)—The culvert would be extended by about 2.8 feet on the eastbound side and 14.85 feet on the westbound side. New concrete headwalls and barriers are proposed at the outlet side. The Midwest Guardrail System would be built in the eastbound direction. Additional fill (embankment) is required next to the proposed culvert extension. Temporary construction easements are required. A temporary water diversion plan is not required, but there would be work in the channel. No trees would be removed.
- Location 13 (PM 49.0)—The culvert would be extended by about 15.2 feet on the eastbound side and 14.2 feet on the westbound side. New concrete headwalls are proposed at the outlet side. Additional fill (embankment) is required next to the existing shoulder to provide a smooth transition to the culvert extension. Right-of-way acquisition and temporary construction easements are required. A temporary water diversion plan is not required, but there would be work in the channel. No trees would be removed.

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the project. These measures are addressed in more detail in the Environmental Consequences section in Chapter 2.

### 1.3.2 No-Build (No-Action) Alternative

The No-Build (No-Action) Alternative would leave fixed objects within the clear recovery zone and the roadway in its existing condition. The No-Build (No-Action) Alternative would not satisfy the need and purpose of the project.

### 1.3.3 Identification of a Preferred Alternative

This section has been added since the draft environmental document.

After the public circulation period, all comments were considered, and the Build Alternative was identified by the project development team as the preferred alternative. The Build Alternative was selected because it meets the purpose and need to remove obstacles from the clear recovery zone, while the No-Build (No-Action) Alternative would leave the project area as it is and leave the obstacles there. The preferred alternative will be documented in the Project Report and approved by Caltrans.

## 1.4 Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Document

The current project description describes work at locations 1-9 and 11-13. The original project description included 13 culvert locations. Location 10 was dropped from the project because that location was completed as part of another Caltrans project.

## 1.5 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

| Agency | Permit/Approval | Status |
|---|---|---|
| U.S. Fish and Wildlife Service | Section 7 of the Endangered Species Act Biological Opinion | The U.S. Fish and Wildlife Service obtained the Biological Opinion on April 15, 2020, (see technical studies bound separately). |
| U.S. Army Corps of Engineers | Clean Water Act Section 404 Nationwide Permit | Application to be submitted during the project's final design phase. |
| California Department of Fish and Wildlife | California Fish and Game Code 1600 Lake or Streambed Alteration Agreement | Application to be submitted during the project's final design phase. |
| California Regional Water Quality Control Boards | Clean Water Act Section 401 Water Quality Certification | Application to be submitted during the project's final design phase. |
| California State Office of Historic Preservation | State Historic Preservation Officer Concurrence Letter | Received February 4, 2020—see technical studies bound separately. |

# Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. So, there is no further discussion of these issues in this document.

- Existing and Future Land Use—The project complies with current land use plans and would have no effect on future land use. (2013 Merced County General Plan)
- Consistency with State, Regional, and Local Plans and Programs—The project is consistent with the Merced County Association of Governments' 2019 Federal Transportation Improvement Program.
- Coastal Zone—The project is not within the coastal zone. (2015 Supplemental Project Study Report, Vicinity Map)
- Wild and Scenic Rivers—There are no protected wild and scenic rivers within the project limits. (U.S. Wild and Scenic Rivers System webpage, January 2019)
- Parks and Recreational Facilities—There are no parks or recreational areas within the project limits. (Merced County, Parks and Recreation webpage, January 2019)
- Timberlands—There are no timberlands or forests in the project area per *California's Forest Resources: Forest Inventory and Analysis, U.S. Department of Agriculture,* Forest Service webpage.
- Growth—The project is not a capacity-increasing project. The project would extend existing culverts and remove and reconstruct headwalls, so it would not disrupt the existing growth patterns in the project area.
- Community Character and Cohesion—Because the project would extend existing culverts, reconstruct guardrail, and replace headwalls, it would not disrupt the existing community character or cohesion, nor would it result in any new impacts to businesses or homes in the project area.
- Environmental Justice—No minority or low-income populations that would be adversely affected by the project have been identified. Therefore, this project is not subject to the provisions of Executive Order 12898.

- Traffic and Transportation/Pedestrian and Bicycle Facilities—The contractor would maintain access to all businesses, homes, and public services at all times. The project would be built with one-lane traffic control, which could create some delays for motorists and impacted users. A Caltrans Public Information Officer would notify impacted groups, such as bicycle users, pedestrians with disabilities, etc., via media releases. (Transportation Management Plan, September 2018)
- Cultural Resources—Within the Area of Potential Effects, seven historic-era resources were identified (revised from four historic-era resources in the draft environmental document). Four of these properties were previously evaluated and determined not eligible for the National Register of Historic Places under any qualifying criteria (revised from two properties in the draft environmental document). The State Historic Preservation Officer concurred with those findings, and those determinations remain valid. The other three historic features were evaluated for the current project and determined not eligible for listing in the National Register of Historic Places (revised from two linear features in the draft environmental document). There are no known prehistoric or historic archaeological resources within the Archaeological Study Area. No new archaeological resources were identified during the archaeological survey for this project. (Valentin 2018) Caltrans, per the Section 106 Programmatic Agreement Stipulation IX.A and as applicable to the Public Resources Code Section 5024 Memorandum of Understanding Stipulation IX.A.2, has determined a Finding of No Historic Properties Affected as appropriate for this project because there are no historic properties within the Area of Potential Effects. According to CEQA Guidelines Section 15064.5(a), Caltrans has determined that there are no historic resources within the project's Area of Potential Effects. The State Historic Preservation Officer agreed with these findings for the current project in a letter dated February 4, 2020 (revised from December 4, 2018, see technical studies bound separately).

  (Historic Property Survey Report, December 2019, revised from November 2018 in the draft environmental document; Historic Resources Evaluation Report, December 2019; Archaeological Survey Report, October 2018)
- Hydrology and Floodplain—The project does not consist of a longitudinal encroachment or a significant encroachment on the base floodplain.

  (Location Hydraulic Study, January 2020) (Revised from September 2018 in the draft environmental document).
- Water Quality—No long-term water quality impacts are expected. All short-term water quality impacts would be addressed in the design and construction phases of the project. To address any potential impacts, Best Management Practices would be implemented in accordance with the Project Planning and Design Guide. The contractor, as required in

Caltrans Standard Specification Section 13-1, must address all potential water quality impacts that may occur during construction.

(Water Quality Assessment Report, October 2019; revised from October 2018 in the draft environmental document)

- Geology/Soils/Seismic/Topography—The project would not present a significant risk to life or property or a significant adverse impact on the natural geology, soil, seismicity, or topography. (Merced County General Plan - Geology, Soils, and Mineral Resources, Section 10-2, November 2012; California Conservation webpage Data Viewer Map)
- Paleontology—The project area contains high sensitivity for paleontological resources. Because excavation for the project would be of limited depth and localized to single-point areas instead of widespread vertical and lateral excavation, the intensity of the impact would be minimal, and mitigation would not be required. There is a low probability of encountering significant paleontological finds.

  (Paleontological Identification Report, November 2019, revised from October 25, 2018, in the draft environmental document)
- Hazardous Waste/Materials—There are no Leaking Underground Storage Tank cases within the project area. The potential of encountering contaminated soil is minimal. Levels of aerially deposited lead in the project limits are below regulatory thresholds.

  The following text about locations 1 and 2 has been added since the draft environmental document: Work at locations 1 and 2 would involve work on bridges with painted surfaces and asbestos-containing materials. A survey for lead-based paint and asbestos-containing materials will be required before construction.

  Caltrans' Standard Special Provision that pertains to Treated Wood Waste would be added to the construction contract for the removal of existing guardrail. The project would not cause impacts to hazardous waste sites.

  (Initial Site Assessment, January 2020, revised from October 2018 in the draft environmental document)
- Air Quality—The project would not adversely affect air quality. The project is exempt from all project-level conformity requirements per 40 Code of Federal Regulations 93.126 because of the proposed safety and drainage improvements at spot locations and the installation of guardrail throughout the project limits. In addition, the project is not a capacity-increasing project or a project of air quality concern.

  (Air Quality Compliance memorandum, November 2019; revised from February 2019 in the draft environmental document)
- Noise—The project is not considered a Type 1 project and is not subject to the Caltrans Traffic Noise Analysis Protocol. No adverse noise impacts from construction are expected because construction would be conducted

in accordance with Caltrans Standard Specifications Section 14-8.02 and applicable local noise standards.

(Noise Compliance Study, November 2019, revised from September 2019 in the draft environmental document)

- Wildfire—The following text has been added since the draft environmental document: The project on State Route 140 from Gustine to Planada is not within or near a very high fire hazard severity zone, per the Fire Prevention Wildland Zone Map in State Responsibility Area. The California Department of Forestry and Fire Protection has determined that Merced County has no very high fire hazard severity zones in the Local Responsibility Area. (Fire and Resource Assessment Program, California Department of Forestry and Fire Protection webpage)

## 2.1 Human Environment

### 2.1.1 Farmland

#### *Regulatory Setting*

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (7 U.S. Code 4201-4209; and its regulations, 7 Code of Federal Regulations Part 658) require federal agencies, such as the Federal Highway Administration, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to non-agricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

#### *Affected Environment*

The Merced State Route 140 Roadside Safety Improvements project encompasses a 40-mile-long segment of State Route 140 in Merced County. It crosses the flat agricultural land of the San Joaquin Valley through Merced County and continues southeast through the foothills of Mariposa County. Within the project limits, the land uses tend toward agricultural and rural residential with higher-density residential housing and commercial areas in the city of Merced and Planada. Project improvements include extending existing culverts, reconstructing existing headwalls, and removing and installing guardrail at 12 locations. Existing culverts transfer water from large

local irrigation canals to other smaller irrigation canals that supply water for agricultural lands.

A Farmland Conversion Impact Rating form for the project was submitted to the Natural Resources Conservation Service in February 2019 for evaluation. In return, the Natural Resources Conservation Service broke down farmland impacts by location number in separate impact rating forms, reflecting which farms were and were not under protection of the Land Conservation Act, and stated that the average farm size is 394 acres (see technical studies bound separately). The total farmland along the corridor is 903.05 acres, according to the Merced County Assessor's Office.

The following text has been added since the draft environmental document: locations 1 and 2 were added to the project description, which increased the direct impacts to farmland from 0.53 acre to 1.03 acres and increased indirect impacts from 0.61 acre to 0.65 acre.

### *Environmental Consequences*

Table 2.1 Farmland Impacts shows right-of-way acquisition (direct impacts) and temporary construction easements (indirect impacts) for the project and identifies farmlands protected under the Land Conservation Act. The project would convert a small amount of farmland that is prime, unique, statewide, or locally important farmland. No farmland parcels would be bisected, and all converted farmland would be for transportation purposes and would be considered a state right-of-way as a result of the project.

Total acreage of direct impacts to farmland (through right-of-way acquisition) is 1.03 acres, with 0.65 acre of indirect impacts from temporary construction easements. These amounts were changed from 0.49 acre of directly converted farmland; with 0.56 acre of temporary impacts noted in the draft environmental document. The total farmland size for this project is 903.05 acres.

**Table 2.1 Farmland Impacts (Acres)**

| Location | Direct Impacts (Right-of-Way Acquisition) | Indirect Impacts (Temporary Construction Easements) | Total Farmland Size | Under Land Conservation Act Protection | Percentage Prime Farmland Lost |
|---|---|---|---|---|---|
| 1 | 0.366 | 0 | 109.82 | Yes | Less than 1 percent Direct/Temporary |
| 2 | 0.132 | 0 | 94.65 | No | Not Applicable |
| 3 | 0 | 0 | Not Applicable | No | Not Applicable |
| 4 | 0 | 0 | Not Applicable | No | Not Applicable |
| 5 | 0.02 | 0.17 | 50.16 | Yes | Less than 1 percent Direct/Temporary |
| 6 | 0.04 | 0.05 | 119.3 | No | Not Applicable |
| 7 | 0 | 0.08 | 3.07 | Yes | Less than 1 percent Temporary Only |
| 8 | 0 | 0.07 | 3.05 | Yes | Less than 1 percent Temporary Only |
| 9 | 0 | 0 | Not Applicable | No | Not Applicable |
| 10 | 0 | 0 | Not Applicable | No | Not Applicable |
| 11 | 0 | 0 | Not Applicable | No | Not Applicable |
| 12 | 0 | 0.07 | 12 | Yes | Less than 1 percent Temporary Only |
| 13 | 0.47 | 0.21 | 511 | Yes | Less than 1 percent Direct/Temporary |

For all locations, the Total Site Assessment Points on the Natural Resources Conservation Service AD-1006 form were under the 160-point threshold. Therefore, no further coordination with the Natural Resources Conservation Service is required. Also, according to the Merced County General Plan Agricultural Resources Element, Policy AG 2.9: Infrastructure Extension policy opposes work in areas designated for agricultural use, “unless necessary to protect public health, safety, and welfare.” The purpose and need of this project would reduce collisions and minimize collision severity involving errant vehicles leaving the traveled way and striking fixed projects, such as culverts and headwalls.

This Caltrans project is consistent with the Merced County General Plan and is listed in the Federal Transportation Improvement Program and the State Highway Operation and Protection Program.

### *Avoidance, Minimization, and/or Mitigation Measures*

Caltrans’ determination of farmland impacts is less than significant, and no mitigation measures are proposed.

### 2.1.2 Relocations and Real Property Acquisition

#### *Regulatory Setting*

The Caltrans Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. See Appendix A for a copy of the Caltrans Title VI Policy Statement.

#### *Affected Environment*

A Right-of-Way Data Sheet was completed for this project in February 2020 (revised from January 2019 in the draft environmental document). The surrounding land use within the project limits is agricultural with some areas of residential use and railroad property. However, the project area consists of mostly agricultural land in Merced County.

#### *Environmental Consequences*

Table 2.2 shows where additional right-of-way or temporary construction easements would be required. The project would move fixed objects outside of the clear recovery zone.

The project would not require property owner relocation assistance because the total acquisition for the project is about 1 acre in canal areas, local roads next to the highway, and slivers of agricultural land, with no residential displacements. See the acquisitions shown in Table 2.2 and the temporary construction easements shown in Table 2.3. Temporary construction easement areas include railroad property, canals, and grazing land. Temporary construction easement use is estimated to last for 12 months.

In Table 2.2 and Table 2.3 below, the acronym APN refers to Assessor's Parcel Number.

**Table 2.2 Right-of-Way Acquisition**

| Location | Assessor's Parcel Number (APN) | Right-of-Way Acquisition (Acre) |
|---|---|---|
| Location 1 (PM 2.3) | APN 060-110-009<br>APN 069-110-070<br>APN 069-270-020<br>APN 069-270-034 | 0.37 acre |
| Location 2 (PM 4.5) | APN 021-050-002<br>APN 021-061-004<br>APN 063-080-032 | 0.13 acre |
| Location 5 (PM 20.6) | APN 049-110-011 | 0.02 acre |
| Location 6 (PM 33.7) | APN 059-030-034<br>APN 059-030-036 | 0.04 acre |
| Location 13 (PM 49.0) | APN 053-190-016<br>APN 053-190-015 | 0.47 acre |

**Table 2.3 Right-of-Way Temporary Construction Easements**

| Location | Assessor's Parcel Number (APN) | Temporary Construction Easement (Acre) |
|---|---|---|
| Location 5 (PM 20.6) | APN 049-110-011 | 0.17 acre |
| Location 6 (PM 33.7) | APN 059-030-034<br>APN 059-030-036<br>APN 059-150-044<br>APN 059-150-016 | 0.05 acre |
| Location 7 (PM 37.8) | APN 061-310-020 | 0.08 acre |
| Location 8 (PM 38.0) | APN 061-310-015 | 0.07 acre |
| Location 12 (PM 39.8) | APN 061-033-004 | 0.07 acre |
| Location 13 (PM 49.0) | APN 053-190-016<br>APN 053-190-015 | 0.21 acre |

The total right-of-way acquisition for this project is 1.03 acres, and the total temporary construction easement area required for this project is 0.65 acre.

### *Avoidance, Minimization, and/or Mitigation Measures*

No relocation assistance or benefits for right-of-way acquisition are required. No mitigation measures are proposed.

## 2.1.3 Utilities and Emergency Services

### *Affected Environment*

A Right-of-Way Data Sheet was completed for this project in February 2020 to determine right-of-way jurisdiction and impacted utilities in the project area (revised from January 2019 in the draft environmental document). A Transportation Management Plan was prepared in September 2018.

The following agencies provide emergency services such as police and fire protection and hospital care for the Merced County area:

- California Highway Patrol—1500 Bell Drive, Merced, California 95301
- Merced County Fire Department—735 Martin Luther King Junior Way, Merced, California 95341
- Merced Police Department—470 West 11th Street, Merced, California 95341
- Merced County Sheriff's Office—700 West 22nd Street, Merced, California 95340
- Mercy Medical Center Clinic—1248 D Street, Merced, California 95341
- Golden Valley Health Centers—857 West Childs Avenue, Merced, California 95341
- Gustine Fire Department—686 3rd Avenue, Gustine, California 95322
- Golden Valley Health Centers—637 Merced Street, Newman, California 95360

The following utilities provide services to the project area:

- Pacific Gas and Electric Company
- Sierra Telephone Company, Inc.
- American Telephone and Telegraph
- Comcast Corporation
- Williams Communications
- Chevron Corporation
- Merced Irrigation District
- Atchison, Topeka and Santa Fe Railway
- Western and Chevron Geophysical Cable

- SBC Cable TV
- GST Telecom Cable

### *Environmental Consequences*

The project would be built with one-lane traffic control and night work, according to the Transportation Management Plan. Access to businesses and homes would be maintained throughout construction. Portable changeable message signs would be used, and impacted groups would be notified of upcoming construction by the Caltrans Public Information Office.

Several underground utilities—gas, fiber optics, communications, oil, cable, sewer, and water—occur in the project area. Potholing would be completed to determine underground conflicts.

Project work at locations 7, 8, and 12 is within or next to the Atchison, Topeka and Santa Fe Railway right-of-way; temporary construction easements would be acquired.

At location 11, the Merced Irrigation District facility would be extended by 20 feet; the Merced Irrigation District would perform the work under a service contract/agreement.

At location 13, proposed right-of-way acquisition (0.47 acre) and temporary construction easements (0.20 acre) are parallel to the highway. There is a conflict with a telephone pedestal; a temporary disruption of this service may occur but would be brief.

### *Avoidance, Minimization, and/or Mitigation Measures*

No mitigation measures are proposed.

## 2.1.4 Visual/Aesthetics

**(This section has been added since the draft environmental document)**

### *Regulatory Setting*

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure that all Americans are safe, healthful, productive, and have aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). To further emphasize this point, the Federal Highway Administration, in its implementation of NEPA (23 U.S. Code 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take action necessary to provide the people of the state

"with…enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities." (California Public Resources Code Section 21001[b])

### *Affected Environment*

A Visual Impact Assessment and Scenic Resource Evaluation were done for this project on February 14, 2014, and an amended report was completed on February 28, 2019. The surrounding land use is agricultural with some residential. The roadsides are mainly made up of scattered grasses with trees and shrubs at the residential locations. There are no qualifying scenic resources that will be affected by implementing the project.

### *Environmental Consequences*

This project will require the removal of roadside trees and shrubs, specifically at location 1 where seven agricultural trees will be removed, and at location 2 where one tree will be removed. Additionally, two black walnut trees will be removed at location 4, and one Valley oak tree and five oleanders will be removed at location 6 due to construction activities. At location 7, one branch of a eucalyptus tree will be trimmed because it is hanging above the traveled way. The project is not on an officially designated scenic highway.

### *Avoidance, Minimization, and/or Mitigation Measures*

Per the Caltrans Highway Design Manual, efforts should be made during the design stage of this project to preserve as much vegetation as possible. Any vegetation that is damaged or removed from within the state right-of-way because of construction activities will be replaced. A replanting plan for the Valley oak tree has been made with the project biologist to replant at least 10 Valley oak trees within the project area. Avoidance, minimization, and mitigation measures for the Valley oak tree can be found in the Natural Communities Section 2.2.1 of this document.

## 2.2 Biological Environment

A Natural Environment Study and a Biological Assessment were prepared for the project in January 2020 (revised from March 2019 in the draft environmental document).

The project area is near the Sierra Nevada foothills, a biologically diverse area known to support unique and endemic species. The action area is made up of 10 areas spread out across about 40 miles, the nearby highway shoulders, an existing Caltrans right-of-way, and areas within the new Caltrans right-of-way. The action area of each of the 12 locations consists of the project footprint and a 100-foot buffer.

### 2.2.1 Natural Communities

**(This section has been added since the draft environmental document)**

#### *Regulatory Setting*

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant, or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species Section 2.2.4. Wetlands and other waters are also discussed below.

#### *Affected Environment*

A Natural Environment Study was prepared in March 2019. An addendum to the Natural Environment Study was completed in August 2019. The project area is occupied by non-native grassland habitat, Valley oak trees, vernal pools, seasonal wetlands and swales, seasonal marshes, drainage basins, ephemeral drainages, culverts, ditches, agricultural areas, and undeveloped residential and commercial lots.

Non-native grassland habitat is not a sensitive community; it is spread between sensitive communities (vernal pools) at location 13. Critical habitat for vernal pools is discussed in the Threatened and Endangered species section later in this chapter. Agricultural areas contain poor quality habitat with very low potential to provide suitable habitat for any sensitive species. Underdeveloped residential and commercial lots and/or developments are not considered habitat and would not support any sensitive species.

Riparian habitat in the project area contains many large Valley oak trees *(Quercus lobate).* The habitat is about 1,300 feet long, 40 feet wide, and is on the edge of an agricultural canal. Valley oak riparian areas are made up of potential habitat, which may be used by wildlife. These trees may provide suitable nesting habitat for avian species, including the state listed Swainson’s hawk.

#### *Environmental Consequences*

Project construction will disturb valley oak riparian habitat, including the removal of a large Valley oak tree. This action will not divide or fragment the habitat.

### *Avoidance, Minimization, and/or Mitigation Measures*

- Tree removal would need to take place outside of the nesting season—February 1 through September 30—to avoid any potential delays due to nesting bird protection requirements.
- Oak trees would be replanted on-site in a Caltrans right-of-way at locations 6 and 4 at a ratio of 10 trees for every tree removed. These plantings would be maintained and monitored.

## 2.2.2 Wetlands and Other Waters

### *Regulatory Setting*

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 U.S. Code 1344), is the main law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands.

Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high-water mark, in the absence of adjacent wetlands. When adjacent wetlands are present, the Clean Water Act jurisdiction extends beyond the ordinary high-water mark to the limits of the adjacent wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of: hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the U.S. Environmental Protection Agency.

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide permit may be permitted under one of the U.S. Army Corps of Engineers' Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines (40 Code of Federal Regulations 230), and whether permit approval is in the public's best interest. The Section 404(b)(1) Guidelines were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a "least environmentally damaging practicable alternative" to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The executive order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as the Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction, and (2) the project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated mainly by the State Water Resources Control Board, the California Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved.

Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Department of Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under the jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

The California Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. In compliance with Section 401 of the Clean Water Act, the California Regional Water Quality Control Boards also issue water quality certifications for activities that may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request.

### *Affected Environment*

A Natural Environment Study and a Biological Assessment were prepared for the project in March 2019. A wetland delineation was conducted in July 2018, and the Ordinary High-Water Mark was delineated in November 2018.

The project limits cross over several waterways, including rivers, perennial creeks, sloughs, and canals such as the Los Banos Creek, McCoy Lateral, Livingston Drain, Bear Creek, Fairfield Canal, and Miles Creek. All waters connect directly or indirectly to the San Joaquin River.

Fieldwork for the determination of wetlands and other waters was conducted in 2018 throughout the existing Caltrans right-of-way and on other parcels where permission to enter had been granted. Field studies included the examination of vegetation, soils, and hydrology to determine the presence or absence of wetland indicators. Delineations of wetlands and other waters were conducted in the action area, following the 1987 U.S. Army Corps of Engineers' Wetlands Delineation Manual, the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (version 2.0), and *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (2008). See Waters of the U.S. Mapping in technical studies is bound separately.

The project area was investigated to determine the presence of U.S. Army Corps of Engineers' jurisdictional waters of the U.S. and wetlands. Approximately 0.06097 acre of isolated wetlands at location 8 is expected to be non-jurisdictional. However, approximately 0.75454 acre of potential U.S. Army Corps of Engineers' jurisdictional waters was identified within the project action areas, making up 0.120 acre of Section 404 wetlands and 0.634561 acre of Section 404 other waters. Habitat for sensitive species and aquatic sites include those for the giant garter snake, Greene's tuctoria, and rare plants. See Table 2.4 for total waters of the U.S. in the action area.

**Table 2.4 Waters of the U.S. in Action Area**

| Location | Acreage |
|---|---|
| 3 | 0.0928 |
| 4 | 0.07227 |
| 5 | 0.15532 |
| 6 | 0.21902 |
| 13 | 0.21513 |

Based on the acreage at each location in Table 2.4, the total acreage of waters of the U.S. in the action area is 0.7545 acre.

### *Environmental Consequences*

Associated riparian vegetation would be removed or disturbed, including one Valley oak tree next to a 1600 jurisdictional waterway, which will be removed from the riparian zone. (The above sentence has been updated since the draft environmental document, see the Natural Communities section above for more information about the Valley oak tree.)

Work within the U.S. Army Corps of Engineers' jurisdictional areas would require coordination with the U.S. Army Corps of Engineers and a Clean Water Act Section 404 Nationwide permit.

Accessing the streambeds, where most work would take place, may disturb nearby wetlands and riparian zones and would require a 1602 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife. Coordination with the regulatory agency would take place during the permit application phase of the project planning process.

Approximately 0.75454 acre of waters of the State occurs within the project areas. Coordination with the Central Valley Regional Water Quality Control Board and a Clean Water Act Section 401 Water Quality Certification would be required for the 0.321 acre of impacts.

Potential impacts at each location are listed in Table 2.5. Approximately 0.321 acre of permanent impacts to potential waters of the U.S. are expected due to the extension of the culverts at locations 4, 5, 6, and 13. All impacts to waters of the U.S. are permanent. Avoidance and minimization efforts would allow for jurisdictional wetlands to be avoided at location 13.

**Table 2.5 Permanent Impacts to Waters of the U.S., Work Below Ordinary High-Water Mark**

| Location | Permanent Impacts (Acre) |
|---|---|
| 4 | 0.039906 |
| 5 | 0.064263 |
| 6 | 0.195233 |
| 13 | 0.021629 |

Based on the acreage at each location in Table 2.5, the total acreage of permanent impacts to waters of the U.S. in the action area is 0.321031 acre.

The following permits would be acquired for the project:

- A Section 1600 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife would be needed for locations 4, 5, 6, and 13.
- A Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board would be required for locations 4, 5, 6, 8, and 13.
- A Clean Water Act Section 404 Nationwide permit from the U.S. Army Corps of Engineers would be required for locations 4, 5, 6, 8, and 13.

As stated previously, the Merced Irrigation District would move its own distribution system outside the clear recovery zone at location 11. Caltrans would coordinate with the Merced Irrigation District to ensure that proper permitting is obtained for location 11.

A U.S. Army Corps of Engineers Clean Water Act Section 401 permit would be obtained to improve water quality. Measures would include rock slope protection and the removal of invasive plant species. In addition, a Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board would be needed to provide no loss of waters of the U.S. at this location. A Section 1600 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife would be required.

### *Avoidance, Minimization, and/or Mitigation Measures*

The following avoidance and minimization measures would be implemented for the project:

- A Spill Prevention Plan would be prepared and would describe the measures to be taken to minimize the risk of fluids or other materials used during construction—oils, transmission and hydraulic fluids, cement, and fuel—from entering streams or contaminating nearby riparian areas. A cleanup protocol would be developed before construction starts and would be implemented in case a spill occurs.

- Stockpiling materials, including portable equipment, vehicles, and supplies (e.g., chemicals) would be restricted to the designated construction staging areas, not including any riparian and wetland areas.
- Construction activities would comply with all construction site Best Management Practices specified in the Stormwater Pollution Prevention Plan.
- Measures that would be in place for location 11 include:
    - Pre-construction surveys for migratory bird surveys.
    - Worker environmental awareness training for construction staff.

### 2.2.3 Plant Species

#### *Regulatory Setting*

The U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife have regulatory responsibility for the protection of special-status plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines. “Special-status” is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. See the Threatened and Endangered Species Section 2.2.3 in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including California Department of Fish and Wildlife species of special concern, U.S. Fish and Wildlife Service candidate species, and California Native Plant Society rare and endangered plants.

The regulatory requirements for the Federal Endangered Species Act can be found at 16 U.S. Code Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found in California Fish and Game Code Sections 1900-1913, and the California Environmental Quality Act (CEQA), found in California Public Resources Code Sections 21000-21177.

#### *Affected Environment*

A Natural Environment Study was prepared for the project in March 2019. Floristic surveys were conducted in the action area between April 2018 and May 2018 following the California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant*

*Populations and Natural Communities* (2009). The surveys were conducted during the appropriate blooming periods for target species.

### *Henderson's Bent Grass*

The California Native Plant Society lists the Henderson's bent grass *(Agrostis hendersonii)* as a rare plant species. Its current ranking is 3.2, which means it meets the definition of the California Endangered Species Act. Its current ranking also means it is eligible for state listing and is moderately threatened in California. Henderson's bent grass is an annual grass of the Poaceae family *(Agrostis)* that is limited to California and Oregon. The species blooms from April to June and is typically found in wetlands, such as vernal pools. It grows to a maximum height of 30 inches. It has short, narrow leaves about 1 inch long. The inflorescence is a dense, narrow, cylindrical tuft no longer than 2 inches long made up of small spikelets with hair-like tips and bent awns.

### *Hoover's Calycadenia*

The California Native Plant Society lists the Hoover's calycadenia *(Calycadenia hooveri)* as a rare plant species. Its current ranking is 1B.3, which means it is rare, threatened, or endangered in California and elsewhere, but not very threatened in California. Hoover's calycadenia meets the definition of the California Endangered Species Act and is eligible for state listing. Hoover's calycadenia is an annual herb of the Asteraceae family *(Calycadenia)*, which is native to California. The species is typically found in valley grasslands and foothill woodlands. It blooms from June to September.

### *Beaked Clarkia*

The California Native Plant Society lists the beaked clarkia *(Clarkia rostrata)* as a rare plant species. Its current ranking is 1B.3, which means it is rare, threatened, or endangered in California and elsewhere, and not very threatened in California. It meets the definition of the California Endangered Species Act and is eligible for state listing. The beaked clarkia is an annual herb of the Onagraceae family *(Clarkia)*, which is native and endemic to California. The species is typically found in valley grasslands and foothill woodlands. It blooms from April to May.

### *Ewan's Larkspur*

The California Native Plant Society lists the Ewan's larkspur *(Delphinium hansenii ssp. ewanianum)* as a rare plant species. Its current ranking is 4.2, which means it is moderately threatened and may meet the definition of the California Endangered Species Act; few of these rankings are eligible for state listing. It is a perennial herb of the Ranunculaceae family *(Delphinium),* which is native and endemic to California. The species is typically found in valley grasslands and foothill woodlands. It blooms from March to May.

*Dwarf Downingia*

The California Native Plant Society lists the dwarf downingia *(Downingia pusilla)* as a rare plant species. Its current ranking is 2B.2, which means it is rare, threatened, or endangered in California, but more common elsewhere, and is moderately threatened. It meets the definition of the California Endangered Species Act and is eligible for state listing. It is an annual herb of the Campanulaceae family *(Downingia)*, which is native to California but is found elsewhere in North America, and beyond such as South America. The species is typically found in wetlands, such as vernal pools. It blooms from March to May. The dwarf downingia is a wildflower that has small flowers that reach a tenth of an inch in width. It grows erect stems with few pointed leaves. The tiny tubular flower is white or blue with yellow spots near the mouth of the tube. The fruit is a capsule about an inch long.

*Forked Hareleaf*

The California Native Plant Society lists the forked hareleaf *(Lagophylla dichotoma*) as a rare plant species. Its current ranking is 1B.1, which means it is rare, threatened, or endangered in California and elsewhere, and seriously threatened in California. It meets the definition of the California Endangered Species Act and is eligible for state listing. The forked hareleaf is an annual herb of the Asteraceae family *(Lagophylla)*, which is native and common to California. The species is typically found in valley grasslands and foothill woodlands. It blooms from April to June.

*Pincushion Navarretia*

The California Native Plant Society lists the pincushion navarretia *(Navarretia myersii)* as a rare plant species. Its current ranking is 1B.1, which means it is rare, threatened, or endangered in California but more common elsewhere, and seriously threatened. It meets the definition of the California Endangered Species Act and is eligible for state listing. It is an annual herb of the Polemoniaceae family *(Navarretia)*, which is native and endemic to California. The species is typically found in wetlands, such as vernal pools. It blooms from April to May. The pincushion navarretia is a wildflower that has small flowers that reach 8 inches wide. The inflorescence grows outer bract lobes with a few at the base.

*Spiny-Sepaled Button-Celery*

The California Native Plant Society lists the spiny-sepaled button-celery *(Eryngium spinosepalum)* as a rare plant species. Its current ranking is 1B.2, which means it is rare, threatened, or endangered in California and elsewhere, and meets the definition of the California Endangered Species Act. Its current ranking also means it is eligible for state listing and is moderately threatened in California. It is an annual or perennial herb of the Apiaceae family *(Eryngium)*, which is limited in California. It is found in wetlands, more specifically vernal pools. It blooms from April to May.

*Merced Phacelia*

The California Native Plant Society lists the Merced phacelia *(Phacelia ciliate)* as a rare plant species. Its current ranking is 3.2, which means it may meet the definition of the California Endangered Species Act. Its current ranking also means it is eligible for state listing and is moderately threatened in California. It is an annual herb of the Boraginaceae family *(Phacelia)*, which is limited in California. The species is typically found in valley grasslands. It blooms from February to May.

### *Environmental Consequences*

*Henderson's Bent Grass*

Vernal pool and/or wetland habitat for this species exists only at location 13. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Hoover's Calycadenia*

This species can only exist in location 13, where valley and foothill grasslands occur at the proper elevation. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Beaked Clarkia*

This species can only exist in location 13, where valley and foothill grasslands occur at the proper elevation. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Ewan's Larkspur*

This species can only exist in location 13, where valley and foothill grasslands occur at the proper elevation. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Dwarf Downingia*

Vernal pool and/or wetland habitat for this species exists only at location 13. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Forked Hareleaf*

This species can only exist at locations 7-12, where valley and foothill grasslands occur at the proper distribution. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Pincushion Navarretia*

Vernal pool and/or wetland habitat for this species exists only at location 13. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

*Spiny-Sepaled Button-Celery*

Only the spiny-sepaled button-celery was found in the action area. Habitat for this species exists only at location 13, within the vernal pools and/or wetlands on-site. The species was found in the action area in the 2018 botanical surveys.

*Merced Phacelia*

Valley grasslands occur at the proper distribution for this species only at locations 7-12. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

### *Avoidance, Minimization, and/or Mitigation Measures*

The following measures would be implemented for all the plant species listed above:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before workers perform any project-related work or activities. A qualified biologist would discuss the federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training will also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan will be prepared and will include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan will be kept on-site and easily accessible throughout the duration of construction.
- The contractor will follow Best Management Practices specifically developed for the project and its location.

- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) will be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project will be re-seeded with a native species seed mix.
- Pre-construction botanical surveys will be completed throughout the new Caltrans right-of-way at location 13. California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) will be followed.
- If any federal, state-listed, or rare species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them will be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff will be coordinated with the U.S. Fish and Wildlife Service.

With the implementation of avoidance and minimization efforts, and no impacts expected, no compensatory mitigation is proposed.

### 2.2.4 Threatened and Endangered Species

#### *Regulatory Setting*

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 U.S. Code Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend.

Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (and Caltrans, as assigned), are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to

avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife is the agency responsible for implementing the California Endangered Species Act.

Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by the California Department of Fish and Wildlife. For species listed under both the Federal Endangered Species Act and the California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the U.S., by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### *Affected Environment*

A Natural Environment Study and a Biological Assessment for the project were prepared in March 2019. The Biological Assessment was originally submitted to the U.S. Fish and Wildlife Service on March 12, 2019, and due to design changes, an updated Biological Assessment was resubmitted on September 12, 2019, for Section 7 consultation. The Biological Opinion was received on April 15, 2020, which can be found in the technical studies bound separately along with the current species list.

Below are descriptions of the critical habitat and the federally listed species of plants and animals that have the potential to occur within the action area.

#### *Critical Habitat*

Critical habitat is defined as a specific geographic area that contains features essential to the conservation of a threatened or endangered species. Critical habitat is designed to protect the essential elements of physical and biological

features of a landscape and essential areas in the appropriate quantity and spatial arrangement that a species needs to survive and reproduce. Within the action area, the U.S. Fish and Wildlife Service has listed six federally listed critical habitat designations for the following species: California tiger salamander, vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, fleshy owl's-clover, and Greene's tuctoria.

### *California Tiger Salamander*

The California tiger salamander *(Ambystoma californiense)* is listed as a federally and state threatened species. Adult California tiger salamanders are terrestrial amphibians, but fully aquatic; they have external gills and fins during the larval stage. This species frequents annual grasslands, foothills, oak savannas, and the edges of mixed woodlands; it spends most of its life underground in burrows. This species is about 7 to 8 inches long with a stocky black body, a broad and rounded snout, and large pale yellow to white spots and bars randomly marking its side body.

At location 13, California tiger salamander critical habitat falls within the grazing fields of the northern and southern portions of the action area. The grasslands contain aquatic habitat (vernal pools and swales), which may provide potential breeding habitat for the species.

### *Giant Garter Snake*

The giant garter snake *(Thamnophis gigas)* is common to the Central Valley wetlands of California. The back of a giant garter snake varies from brownish to olive with a checkered pattern of black spots, and a yellow stripe down the center. Two light-colored stripes run along its sides. The giant garter snake's underside is cream to olive or brown and sometimes infused with orange.

### *Fairy Shrimp*

Wet season surveys were conducted for the 2018 wet season between January 31, 2018, and May 10, 2018. Caltrans biologists collected samples of vernal pool species under the U.S. Fish and Wildlife Service 10(a)(1)(A) Recovery Permit TE-032713-3. The collected samples were identified in an office under a stereo microscope using the key provided in the book *Fairy Shrimps of California's Puddles, Pools, and Playas* (Eriksen and Belk 1999). A 90-day report was prepared and submitted to the U.S. Fish and Wildlife Service for the wet seasons sampled. Some aquatic resources sampled during the 2018 wet season with no identified branchiopod species were later surveyed in August 2018 during the 2018 dry season.

The fairy shrimp prefers small vernal pools with clear, cool water and feeds on algae, bacteria, protozoa, and detritus. It has no anti-predator defenses, so it is a food source for other species, including the California tiger salamander, western spadefoot toad, and various waterfowl, which may disperse fairy shrimp to other vernal pools during migration.

The vernal pool fairy shrimp *(Branchinecta lynchi)* is a federally threatened freshwater crustacean. It ranges in size from 0.12 inch to 1.5 inches long and typically appears to be semi-transparent or grayish-white. It has a delicate elongated body, large compound eyes, and 11 pairs of swimming legs. It is different from other fairy shrimp by the presence and size of mounds on the male's second antennae, and by the female's short pear-shaped brood pouch.

The conservancy fairy shrimp *(Branchinecta conservation)* is a federally endangered freshwater crustacean found in vernal pools and vernal pool-like habitats. It is about 0.5 inch to 1 inch long. It has a delicate elongated body, large compound eyes, no carapace (exterior), and 11 pairs of swimming legs. This species is different from other fairy shrimp by the distal segment of the male's second antennae, which is about 30 percent shorter than the basal segment, and its tip is bent about 90 degrees. The female brood pouch is tapered at each end and has a terminal opening.

The vernal pool tadpole shrimp *(Lepidurus packardi)* is a federally endangered freshwater crustacean found in vernal pools and vernal pool-like habitats. It is 2 inches long and has a shield-like carapace that is up to 1.3 inches long. It has compound eyes, up to 48 pairs of swimming legs, two cercopods, and pincer-like appendages at the end of its tail.

*Colusa Grass*

The U.S. Fish and Wildlife Service lists Colusa grass *(Neostapfia colusana)* as a federally threatened species. It is an annual grass member of the Chloridoideae family *(Poaceae),* which is limited to California. It is usually found growing in single species stands in alkaline basins of the Sacramento and San Joaquin valleys, as well as in acidic soils along the eastern San Joaquin Valley and the Sierra Nevada foothills.

Colusa grass is a clumping bunchgrass with distinctive cylindrical inflorescences covered in flat spikelets; the inflorescences are said to resemble the tiny ears of corn. This grass blooms from May to August. It has fruits and grains covered in a gluey secretion and, when a plant is mature, each clump becomes brown and sticky.

Habitat for this species exists only at location 13 within the vernal pool and/or wetlands. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

Focused botanical surveys were conducted during a drought year, so suitable habitat for Colusa grass could be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with Colusa grass and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for Colusa

grass to maintain a viable population. Also, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site.

*Succulent (Fleshy) Owl's-Clover*

The U.S. Fish and Wildlife Service lists the succulent (fleshy) owl's-clover *(Castilleja campestris ssp. succulenta)* as a federally threatened species. Focused surveys were conducted for the succulent (fleshy) owl's-clover during the 2018 blooming season. The succulent (fleshy) owl's-clover is an annual grass member of the Broomrape family *(Orobanchaceae)*, which is limited in California. The succulent (fleshy) owl's-clover is a hemiparasitic species that obtains its nutrients from the roots of other nearby plants. It grows in northern claypan and northern hardpan vernal pool soils in the vernal pool regions of the Sierra Nevada foothills and co-occurs with several other native species of vernal pool plants.

The succulent (fleshy) owl's-clover has grown in acidic soils and is associated with the following soil types within the southern Sierra Foothills Vernal Pool Region: Amador, Anderson, Corning, Fallbrook, Hideaway, Keyes, Pentz, Ramona, Redding, San Joaquin, Vista, Yokohl, and the Pollasky-Montpellier complex. The succulent (fleshy) owl's-clover is also associated with vernal pools that have an average depth of 6 to 10 inches that lack an overabundance of non-native water-dominant grasses.

The succulent (fleshy) owl's-clover is an erect herbaceous plant that ranges between 1.96 and 11.8 inches tall. It blooms in April and May and produces small yellow, long tubular flowers that form a clustered spike. Threats to the survival of the succulent (fleshy) owl's-clover include urbanization, agriculture, and other vernal pool habitat-degrading activities.

*Greene's Tuctoria*

The U.S. Fish and Wildlife Service lists the Greene's tuctoria *(Tuctoria greenei)* as a federally endangered species. It is an annual grass member of the Gramineae family *(Poaceae)*, which is limited in California. It occurs in wetlands, more specifically vernal pools in open grasslands on the eastern side of the Sacramento and San Joaquin valleys and the nearby foothills. Unusual for grasses in its group, Greene's tuctoria is not only known for its low elevations, but also its mountain locations in Modoc and Shasta counties.

Greene's tuctoria is an erect-becoming-decumbent plant that ranges from 2 to 6 inches tall. It blooms in May, June, and July, and produces florets that are protected by veiny bracts tipped by numerous tiny teeth. Greene's tuctoria is threatened by agriculture, urban development, overgrazing and trampling by livestock, alterations in hydrology, and introduced species.

*Hairy Orcutt Grass*

The U.S. Fish and Wildlife Service lists hairy orcutt grass *(Orcuttia pilosa)* as a federally endangered species. It is an annual grass that belongs to the grass family *(Poaceae).* This species is endemic to California's vernal pool regions, with populations occurring in northeastern Sacramento Valley and the southern Sierra Nevada foothills. Hairy orcutt grass has been noted to occur on specific soils depending on its location; in the southern Sierra Nevada foothills, it occurs on the Cometa, Greenfield, Hanford, Meikle, and Whitney soil series.

Hairy orcutt grass grows in tufts of numerous stems that range between 2 and 8 inches tall. Florets emerge as early as April and, depending on annual rainfall, can bloom as late as September. The size of this population can vary from year to year depending on the amount of rainfall; however, small-numbered populations with plants numbering less than 100 are not expected to persist.

*San Joaquin Valley Orcutt Grass*

The U.S. Fish and Wildlife Service lists San Joaquin Valley orcutt grass *(Orcuttia inaequalis)* as a federally threatened species. This species is a member of the grass family *(Poaceae)* and is endemic to California. Mature plants grow from tufts of several erect stems, ranging between 2 and 12 inches long. Like hairy orcutt grass, this species has a gray appearance due to the presence of long hairs on the stem and leaves and produces three different types of leaves throughout its lifetime. Plants initially grow under water for about three months and then produce floating leaves in response to increasing water temperatures in pools. Floating leaves remain as long as standing water is present. Once water has entirely evaporated from pools, which typically happens during June and July, San Joaquin Valley orcutt grass produces terrestrial leaves. Inflorescences emerge within days of the disappearance of the standing water, with flowering peaking in June and July but sometimes extending through August and September.

*Swainson's Hawk*

The Swainson's hawk is a state threatened species, and is a summer migrant in the Central Valley, Sacramento Valley, Klamath Basin, northeastern plateau, and Lassen, Kern, Mono, and Inyo counties. Individuals migrate north to California in March through May and return to South America in September through October.

Swainson's hawks breed and forage in large expanses of grasslands, agricultural lands, and alfalfa fields. They nest in tall trees such as oaks, cottonwoods, walnuts, and willows, usually near rivers or streams next to their foraging areas. They usually prey on small mammals (especially voles), lizards, birds, and insects. Breeding occurs from late March to late August, with peak activity in late May through July. Nests are made up of a platform of

sticks, bark, and fresh leaves built in a tree or bush, or on a utility pole from 4 to 100 feet above ground. Once abundant in California, their population has declined from the loss of nesting and foraging habitat.

Protocol surveys for the Swainson's hawk were not conducted for the project. No nests were seen during the multiple site visits at the project locations. However, there are several trees within the project vicinity that could provide potential nesting habitat, along with suitable foraging locations nearby.

*Boggs Lake Hedge-Hyssop*

The California Department of Fish and Wildlife lists the Boggs lake hedge-hyssop *(Gratiola heterosepala)* as a state endangered species. Botanical surveys for this species were performed in 2018. Boggs lake hedge-hyssop is an annual herb member of the Plantaginaceae family *(Gratiola),* which is limited in California and Oregon. The species occurs only in clay soils in or near shallow water such as at the margins of lakes and vernal pools. Boggs lake hedge-hyssop has reddish-green stems. Its thin stems and small leaves are dotted with hair-like glands. The top of its stem is occupied by an inflorescence that produces long tubular yellow flowers with white tips. This herb blooms from April to September.

### *Environmental Consequences*

Table 2.6a shows the Endangered Species Act determinations for 16 species included in the U.S. Fish and Wildlife Service special-status species queries performed for the project. Of the 16 species, three species were found to have at least a low potential to occur on-site. Table 2.6b shows the Endangered Species Act determinations for critical habitat. Formal consultation with the U.S. Fish and Wildlife Service was initiated on March 12, 2019.

**Table 2.6a Endangered Species Act Determinations**

| Common Name | Scientific Name | Status | Determination |
|---|---|---|---|
| Fresno Kangaroo Rat | *Dipodomys nitratoides exilis* | Federally Endangered | No Effect |
| San Joaquin Kit Fox | *Vulpes macrotis mutica* | Federally Endangered | No Effect |
| Blunt-Nosed Leopard Lizard | *Gambelia silus* | Federally Endangered | No Effect |
| Giant Garter Snake | *Thamnophis gigas* | Federally Threatened | May Affect, Likely to Adversely Affect |
| California Red-Legged Frog | *Rana draytonii* | Federally Threatened | No Effect |
| California Tiger Salamander | *Ambystoma californiense* | Federally Threatened | May Affect, Not Likely to Adversely Affect |

| Common Name | Scientific Name | Status | Determination |
|---|---|---|---|
| Delta Smelt | *Hypomesus transpacificus* | Federally Threatened | No Effect |
| Valley Elderberry Longhorn Beetle | *Desmocerus californicus dimorphus* | Federally Threatened | No Effect |
| Conservancy Fairy Shrimp | *Branchinecta conservation* | Federally Endangered | May Affect, Not Likely to Adversely Affect |
| Vernal Pool Fairy Shrimp | *Branchinecta lynchi* | Federally Threatened | May Affect, Likely to Adversely Affect |
| Vernal Pool Tadpole Shrimp | *Lepidurus packardi* | Federally Endangered | May Affect, Not Likely to Adversely Affect |
| Colusa Grass | *Neistapfia colusana* | Federally Threatened | May Affect, Not Likely to Adversely Affect |
| Succulent (Fleshy) Owl's-Clover | *Castilleja campestris ssp. succulenta* | Federally Threatened | May Affect, Not Likely to Adversely Affect |
| Greene's Tuctoria | *Tuctoria greenei* | Federally Endangered | May Affect, Not Likely to Adversely Affect |
| Hairy Orcutt Grass | *Orcuttia pilosa* | Federally Endangered | May Affect, Not Likely to Adversely Affect |
| San Joaquin Valley Orcutt Grass | *Orcuttia inaequalis* | Federally Threatened | May Affect, Not Likely to Adversely Affect |
| California Central Valley Steelhead Trout, Distinct Population Segment (DPS) | *Oncorhynchus mykiss* | Federally Threatened | No Effect |

## Table 2.6b Endangered Species Act Determinations of Critical Habitats

| Type of Critical Habitat | Determination |
|---|---|
| Critical Habitat for Succulent (Fleshy) Owl's-Clover | May Affect, Not Likely to Adversely Affect |
| Critical Habitat for Greene's Tuctoria | May Affect, Not Likely to Adversely Affect |
| Critical Habitat for Conservancy Fairy Shrimp | May Affect, Likely to Adversely Affect |
| Critical Habitat for Vernal Pool Fairy Shrimp | May Affect, Likely to Adversely Affect |
| Critical Habitat for Vernal Pool Tadpole Shrimp | May Affect, Likely to Adversely Affect |
| Critical Habitat for California Tiger Salamander | May Affect, Not Likely to Adversely Affect |
| Critical Habitat for California Central Valley Steelhead Trout | No Effect |
| Chinook Salmon Essential Fish Habitat | No Effect |

*Critical Habitat*

Although critical habitat for the California tiger salamander, vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, fleshy owl's-clover, and Greene's tuctoria occurs within the action area at location 13, only primary constituent elements for vernal pool fairy shrimp, vernal pool tadpole shrimp, and conservancy fairy shrimp occur within the impact area.

The U.S. Fish and Wildlife Service has listed critical habitat for the vernal pool fairy shrimp, vernal pool tadpole shrimp, and conservancy fairy shrimp within the action area. At location 13, the action area was mapped as critical habitat. Most of the action area there is occupied by non-native grassland and interspersed aquatic features (vernal pools and swales). Some of the aquatic features are seasonal and provide wet periods of sufficient duration during years of average rainfall to support the incubation, maturation, and reproduction of vernal pool fairy shrimp. These features further support this species by providing food, shelter, and dispersal habitat. The southern portion of the location 13 action area within mapped critical habitat contains the primary constituent elements to support the vernal pool fairy shrimp.

*California Tiger Salamander*

It is Caltrans' determination that the project *may affect, not likely to adversely affect* the California tiger salamander. Small mammal burrows were not seen on-site. The action area contains potential upland habitat for the California tiger salamander. Additionally, grassland habitat within the action area could also provide suitable dispersal habitat to salamanders that may be in the area.

It is Caltrans' determination that the project *may affect, not likely to adversely affect* critical habitat for the California tiger salamander. Areas of mapped critical habitat within upland non-native grasslands lack small mammal burrows to provide upland refuge for the species for shelter, feeding, and protection from predators and extreme temperatures. On-site aquatic and upland areas within mapped critical habitat for the California tiger salamander are not expected to contain the necessary primary constituent elements to support the species.

Overall permanent impacts to dispersal habitat will be minimal and discountable: less than half an acre. Permanent impacts that may result from the project are not expected to have a negative effect on potential California tiger salamander populations that may be in the area. Also, habitat that would be impacted is directly next to the roadway and receives constant disturbance from nearby traffic.

Permanent and temporary impacts to California tiger salamander upland and aquatic habitat are not expected to occur. Vernal pools, seasonal wetlands, seasonal wetland swales, roadside ditches, and detention basins were all considered "potential breeding habitat" for California tiger salamanders. Any

pools that could be considered suitable breeding habitat would be avoided during construction.

*Giant Garter Snake*

It is Caltrans' determination that the project *may affect, likely to adversely affect* the giant garter snake because there is potentially suitable aquatic and terrestrial habitat at locations 3, 4, 5, and 6, and construction would take place during the inactive period for the giant garter snake. During this time (May 1 to October 1), giant garter snakes may be dormant and unable to flee the work area. However, only small sections of potential habitat will be affected. Table 2.7 shows the areas of impact that would result from the proposed action (information in this paragraph has been updated since the draft environmental document).

**Table 2.7 Potential Area of Impact to Giant Garter Snake Aquatic and Terrestrial Habitats**

| Location and Type of Habitat | Permanent | Temporary |
|---|---|---|
| Location 3 Aquatic Habitat | 0 acre | 0 acre |
| Location 3 Terrestrial Habitat | 0.149 acre | 0.232 acre |
| Location 4 Aquatic Habitat | 0.014 acre | 0.017 acre |
| Location 4 Terrestrial Habitat | 0.334 acre | 0.337 acre |
| Location 5 Aquatic Habitat | 0.013 acre | 0.089 acre |
| Location 5 Terrestrial Habitat | 0.178 acre | 0.422 acre |
| Location 6 Aquatic Habitat | 0.030 acre | 0.045 acre |
| Location 6 Terrestrial Habitat | 0 acre | 0.066 acre |

The total permanent area of impact to aquatic giant garter snake habitat is 0.058 acre. The total permanent area of impact to terrestrial habitats is 0.661 acre (revised from 0.512 acre from the draft environmental document). Temporary impacts to aquatic giant garter snake habitat total 0.151 acre, and temporary impacts to terrestrial habitats total 0.826 acre.

*Vernal Pool Fairy Shrimp*

Vernal pool habitat was only present in the action area at location 13. There were six pools, with one pool being bisected into two pools by the culvert. Surveys for the vernal pool fairy shrimp were carried out during the 2018 wet season. The vernal pool fairy shrimp was identified in four out of seven of the pools within the action area. Additional surveys were carried out during the 2018 dry season. The vernal pool fairy shrimp was identified in the final three vernal pools during those surveys, and no other listed brachiopods were found during surveys. Impacts to the vernal pool fairy shrimp at location 13 would occur from soil disturbances associated with clearing and grubbing and the presence of construction equipment and vehicles; both could displace

cysts in areas that receive seasonal inundation sufficient for the completion of the reproductive cycle.

Therefore, it is Caltrans' determination that the project *may affect, likely to adversely affect* the vernal pool fairy shrimp; *may affect, not likely to adversely affect* the vernal pool tadpole shrimp; and *may affect, not likely to adversely affect* the conservancy fairy shrimp.

*Fairy Shrimp Critical Habitat*

It is Caltrans' determination that the project *may affect, likely to adversely affect* the conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The permanent and temporary loss of suitable habitat would directly impact the on-site population of the vernal pool fairy shrimp. Although it is likely that the vernal pool fairy shrimp would persist in other areas of suitable habitat in the action area that would not be impacted by the project, the on-site population would be reduced. Areas of habitat that would be temporarily impacted during construction would become available for use by the species once the project is built, but it would take some time for natural conditions to be restored and for individuals to re-colonize the area.

The species could also be indirectly impacted by the continued loss of habitat. Construction activities such as clearing, grubbing, and grading would directly impact critical habitat through the permanent and temporary removal of aquatic habitat. Additional direct impacts would occur through the temporary presence of construction equipment and vehicles within the project footprint. There is also the potential for indirect impacts to designated critical habitat through the introduction or spread of invasive species of plants. See Table 2.8 for project impact totals for critical habitat.

**Table 2.8 Summary of Impacts to Vernal Pool Fairy Shrimp**

| Impact Type | Project Impacts (acre) |
|---|---|
| Acre of Permanent Impacts within Critical Habitats | 0.008 |
| Acre of Temporary Impacts within Critical Habitats | 0.013 |
| Acre of Permanent Impacts outside Critical Habitats | 0.008 |
| Acre of Temporary Impacts outside Critical Habitats | 0.008 |

Based on the totals in Table 2.8, the total acre of impacts in the action area would be 0.037 acre for the project.

*Colusa Grass*

Colusa grass has not been documented in the action area, so the project is not expected to impact individual plants. However, suitable habitat for this species may be present in non-native grasslands.

### *Succulent (Fleshy) Owl's-Clover*

It is Caltrans' determination that the project *may affect, not likely to adversely affect* the succulent (fleshy) owl's-clover. There are no documented occurrences of the succulent (fleshy) owl's-clover within the action area. The closest documented occurrence is about a tenth of a mile away, and is dated from 2001, south of State Route 140. Suitable habitat only occurs at location 13.

Focused surveys were conducted for the succulent (fleshy) owl's-clover during the 2018 blooming season, though no reference sites were visited. The species was not found within the action area. However, the survey occurred during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site.

### *Greene's Tuctoria*

It is Caltrans' determination that the project *may affect, not likely to adversely affect* Greene's tuctoria. There are no documented occurrences of the species within the action area. The closest known population occurs next to the action area at location 13, within 1 mile north of State Route 140. The latest recorded occurrences within 1 mile were from 1975.

Focused surveys were conducted for Greene's tuctoria during the 2018 blooming season, but it was not identified within the action area.

### *Hairy Orcutt Grass*

It is Caltrans' determination that the project *may affect, not likely to adversely affect* hairy orcutt grass. Habitat for this species exists only at location 13, within the vernal pools and/or wetlands on-site. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference sites were visited. There are no known occurrences within 1 mile of the action area.

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. The presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site.

*San Joaquin Valley Orcutt Grass*

It is Caltrans' determination that the project *may affect, not likely to adversely affect* San Joaquin Valley orcutt grass. Vernal pool and/or wetland habitat for this species exists only at location 13. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

Focused botanical surveys were conducted during a drought year, so there is a possibility that suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site.

*Swainson's Hawk*

Although Swainson's hawks or their nests were not seen during site visits, several trees within the project vicinity could provide potential nesting habitat, along with suitable foraging locations nearby. Two trees would be removed during construction. With the implementation of the proposed avoidance and minimization measures, no impacts to the Swainson's hawk are expected.

*Boggs Lake Hedge-Hyssop*

Vernal pool and/or wetland habitat for this species exists only at location 13. The species was not found in the action area or in the area next to the action area in the 2018 botanical surveys, but no reference site was visited. There are no known occurrences within 1 mile of the action area.

### *Avoidance, Minimization, and/or Mitigation Measures*

The following avoidance and minimization measures would be implemented for the following critical habitat and species.

If any federally listed species are found within the action area, the U.S. Fish and Wildlife Service would be notified, and the occurrence would be submitted to the California Natural Diversity Database.

*Critical Habitat*

Work would be restricted to the minimal amount necessary to complete the project so that the construction footprint would have the least amount of disturbance to species and their habitats, while also using environmentally sensitive area fencing to reduce potential disturbances.

Aquatic resources next to the edge of a right-of-way found to be suitable for the vernal pool fairy shrimp would be excluded before construction starts by

environmentally sensitive area fencing. Access, egress, and ground-disturbing activities would be sited to avoid vernal pools, where feasible. If construction activities impact the integrity of pool hydrology within the micro-watershed, then compensation may be required for that pool, which would be determined during consultation with the U.S. Fish and Wildlife Service. Compensatory mitigation ratios may be higher in areas designated as critical habitat than in non-critical habitat areas.

Compensatory mitigation would be required for unavoidable effects to critical habitat. This would require consultation with the U.S. Fish and Wildlife Service to determine appropriate compensatory ratios, which may include:

- Purchasing conservation bank credits from a U.S. Fish and Wildlife Service-approved bank—when made available—for vernal pool fairy shrimp.
- Restoring habitat on protected land, which may include Natural Community Conservation Plans or Habitat Conservation Plans.
- Establishing new habitat by permittee-responsible mitigation through the purchase of mitigation lands or changes in current land practices to increase the existing nearby natural landscape.

Compensatory mitigation ratios may be higher in areas designated as critical habitat than non-critical habitat areas.

*California Tiger Salamander*

With the implementation of avoidance and minimization measures, no permanent or temporary impacts will occur to the California tiger salamander; no compensatory mitigation is proposed. The following measures have been included in the project to protect this species only at location 13:

- Biological monitoring and pre-construction surveys will occur to protect any migrating California tiger salamanders during the migration season, which is from November 1 to May 31.
- Environmentally sensitive area exclusion fencing would be installed around potential breeding ponds to prevent any individuals from entering the work area.
- A qualified biologist would conduct a worker environmental awareness training for all construction staff who enter the project site, and before they perform any project-related work or activities. The training would discuss the federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- Areas next to but outside the work area would be protected with brightly colored, dual-purpose environmentally sensitive area fencing to prevent

unnecessary disturbances to habitat and/or species. The environmentally sensitive area fencing would exclude California tiger salamanders and be applied to off-site areas next to the project footprint that contain suitable aquatic features. A qualified biologist would oversee the installation and would visit the site weekly to ensure that the fencing is in good working condition.

- If a 70 percent or greater chance of rainfall is predicted within 24 hours of a project activity, a qualified biologist would survey the project site for the presence of migrating California tiger salamanders before construction starts each day that rain is forecasted.
- No project work that could impact migrating California tiger salamanders would occur during or within 48 hours following significant rain events, defined as ¼-inch or more of rain in a 24-hour period.
- For work conducted during the migration season, which is from November 1 to May 31, a qualified biologist would survey active work areas (including access roads) in the morning, following measurable precipitation that measures less than ¼-inch. Construction may not start until the biologist has confirmed that no California tiger salamanders are in the work area.
- Trenches greater than 6 inches deep would be required to be covered or have an escape ramp present. These would be checked daily for trapped California tiger salamanders and other wildlife. Before trenches are filled, they would be inspected thoroughly for trapped wildlife.
- Any pipes or culverts stored on-site must be capped to prevent entry by a California tiger salamander. Pipes must be inspected before they are installed to ensure that California tiger salamanders have not taken cover inside. If any California tiger salamanders are found on pipes or culverts, the assigned Caltrans biologist would be notified.
- Vehicle travel would be limited to established roadways unless otherwise designated. Any travel beyond the paved highway would adhere to a 20-mile-per-hour daytime speed limit and 10-mile-per-hour nighttime speed limit.
- Areas that would be temporarily impacted due to construction would be seeded with a native seed mix once construction is complete.

No compensatory mitigation is proposed for the California tiger salamander or designated critical habitat because the channel that the project would impact is not suitable breeding habitat and does not contain all the necessary primary constituent elements to support the species.

*Giant Garter Snake*

The U.S. Fish and Wildlife Service developed the following measures that would be implemented to avoid and minimize effects to the giant garter snake only at locations 3-6:

- Since construction would occur during the inactive season for the giant garter snake, which is from October 2 to April 30, Caltrans proposes to also compensate for temporary impacts to potential giant garter snake habitat.
- A qualified biologist would conduct pre-construction surveys to identify areas that have the potential to encounter a giant garter snake.
- Before work starts, silt fencing would be installed around the project limits to prevent giant garter snakes from entering the work area.
- There would be a biological monitor present during any initial clearing and grubbing activities in areas that have the potential to encounter a giant garter snake.
- Construction personnel would participate in a worker environmental awareness program approved by the U.S. Fish and Wildlife Service. A qualified biologist would inform all construction personnel about the life and history of the giant garter snake, how to identify the species and its habitats, what to do if a giant garter snake is encountered during construction activities, as well as explain the state and federal laws that pertain to the giant garter snake.
- Standard construction Best Management Practices would be implemented throughout construction to avoid and minimize adverse effects to water quality within the project impact area.
- If a live giant garter snake is encountered during construction activities, the biological monitor would do the following:
    - Stop construction activity in the vicinity of the giant garter snake.
    - Monitor the giant garter snake and allow it to leave on its own.
    - The monitor would remain in the area for the remainder of the workday to make sure that the giant garter snake is not harmed or that it leaves the site and does not return. Escape routes for the giant garter snake would be determined in advance of construction. If the giant garter snake does not leave on its own within one working day, further consultation with the U.S. Fish and Wildlife Service would be conducted.

Unavoidable effects to the giant garter snake would require consultation with the U.S. Fish and Wildlife Service to determine appropriate compensatory ratios, which may include:

- Purchasing conservation bank credits from a U.S. Fish and Wildlife Service- and California Department of Fish and Wildlife-approved bank—when made available—for the giant garter snake.
- Restoring habitat on protected land, which may include Natural Community Conservation Plans or Habitat Conservation Plans.

- Establishing new habitat by permittee-responsible mitigation through the purchase of mitigation lands or changes in current land practices to increase the existing nearby natural landscape.
- Giant garter snake temporary impacts would be recontoured and revegetated with an appropriate weed-free native plant seed mixture following the completion of construction.

*Vernal Pool Fairy Shrimp*

Aquatic resources next to the edge of a right-of-way that are found to be suitable for the vernal pool fairy shrimp would be excluded by environmentally sensitive area fencing before construction starts. Access, egress, and ground-disturbing activities would be sited to avoid vernal pools, where feasible. If construction activities impact the integrity of pool hydrology within the micro-watershed, then compensation may be required for that pool, which would be determined during consultation with the U.S. Fish and Wildlife Service. Unavoidable effects would be compensated through purchasing credits at a mitigation bank approved by the applicable regulatory agency or agencies.

Unavoidable effects to fairy shrimp would require consultation with the U.S. Fish and Wildlife Service to determine appropriate compensatory ratios. Compensatory mitigation ratios may be higher in areas designated as critical habitat than in non-critical habitat areas. Compensatory mitigation for fairy shrimp includes the following:

- Purchasing conservation bank credits from a U.S. Fish and Wildlife Service-approved bank—when made available—for vernal pool fairy shrimp.
- Restoring habitat on protected land, which may include Natural Community Conservation Plans or Habitat Conservation Plans.
- Establishing new habitat by permittee-responsible mitigation through the purchase of mitigation lands or changes in current land practices to increase the existing nearby natural landscape.

*Colusa Grass*

The following avoidance and minimization measures have been included in the project to protect Colusa grass:

- A qualified biologist would conduct a worker environmental awareness training for all construction staff who enter the project site, and before they perform any project-related work or activities. The training would cover the federally listed species that have the potential to occur in the project area.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way.

- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, re-initiation with the U.S. Fish and Wildlife Service may be required. Transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Succulent (Fleshy) Owl's-Clover*

This species has not been documented in the action area, so no impacts to individual plants are expected to occur from the proposed action. However, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following avoidance and minimization measures have been included in the project to protect the succulent (fleshy) owl's-clover:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. Methodologies outlined in the California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any

individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Greene's Tuctoria*

Surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site.

The following measures would be implemented to avoid and minimize effects to Greene's tuctoria:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any

individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Hairy Orcutt Grass*

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. These areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following measures would be implemented to avoid and minimize effects to hairy orcutt grass:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable

location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*San Joaquin Valley Orcutt Grass*

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. These areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following measures would be implemented to avoid and minimize effects to San Joaquin Valley orcutt grass:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project wold be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the

collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Swainson's Hawk*

The following measures would be implemented to avoid and minimize effects to the Swainson's hawk:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- If construction occurs during the nesting season, which is from February 1 to September 30, pre-construction nesting surveys would be completed throughout the new Caltrans right-of-way. Surveys would follow general guidelines identified in the "*Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*."
- If Swainson's hawks are seen nesting within a half-mile of the project, a 600-foot-radius no-work buffer would be designated. Nest trees would be identified, and environmentally sensitive area fencing would be installed around nest trees and wherever the no-work buffer overlaps with construction activities.
- Nest trees would be monitored until a qualified biologist has determined that the birds have fledged.
- If work needs to occur within the 600-foot buffer, some activities may be allowed if a biological monitor is present and determines that those construction activities are not disrupting nesting Swainson's hawks.

*Boggs Lake Hedge-Hyssop*

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following measures would be implemented to avoid and minimize effects to the Boggs lake hedge-hyssop:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover the federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed, state-listed, or rare species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

### 2.2.5 Invasive Species

#### *Regulatory Setting*

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued on August 10, 1999, directs the use of the state’s invasive species list, maintained by the California Invasive Species Council, to define the invasive

species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a project.

### *Affected Environment*

A Natural Environment Study and a Biological Assessment for the project were prepared in January 2020 (revised from February 2019 in the draft environmental document).

The following invasive species were found growing throughout the biological study areas in disturbed areas next to the highway: poison hemlock *(Conium),* black mustard *(Brassica nigra),* milk thistle *(Silybum marianum),* red brome *(Bromus madritensis),* and ripgut *(Bromus diandrus).* General Caltrans maintenance activities along this route involve grading shoulders and minimizing vegetation. The disturbed areas are also caused by pedestrian and vehicular traffic.

### *Environmental Consequences*

To prevent the introduction and spread of other invasive species into the project area, Caltrans has issued policy guidelines that provide a framework for addressing roadside vegetation management and minimization measures for construction activities and maintenance programs as follows:

- Caltrans periodically maintains vegetation in its rights-of-way by mowing, disking, and spraying herbicides.
- Staging and storing equipment should be done in weed-free areas. Infestations of noxious and/or highly invasive weeds were mapped during the project planning phase to determine if hand, mechanical, or chemical eradication treatments are feasible, or if it is feasible to exclude those areas from the contractor's use.
- A non-standard special provision would be included in the construction contract that requires construction equipment and vehicles to be cleaned before entering and exiting the project site.

### *Avoidance, Minimization, and/or Mitigation Measures*

No mitigation is proposed.

# Chapter 3 CEQA Evaluation

## 3.1 Determining Significance under CEQA

The project is a joint project by the California Department of Transportation (Caltrans) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The Federal Highway Administration's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code Section 327 and the Memorandum of Understanding dated December 23, 2016, and executed by the Federal Highway Administration and Caltrans. Caltrans is the lead agency under NEPA and CEQA.

One of the main differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement, or a lower level of documentation, would be required. NEPA requires that an Environmental Impact Statement be prepared when the proposed federal action as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an Environmental Impact Report. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

## 3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant with Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project would indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

### 3.2.1 Aesthetics

***CEQA Significance Determinations for Aesthetics***

Except as provided in Public Resources Code Section 21099, would the project:

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

**No Impact**—No qualifying scenic resources, as defined by Section 15300.2(d) of the California Environmental Quality Act, Implementation Guidelines, would be affected by 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**—No qualifying scenic resources, as defined by Section 15300.2(d) of the California Environmental Quality Act, Implementation Guidelines, would be affected by the project.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the

project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

**Less Than Significant Impact—**The project would not substantially degrade the existing visual character or quality of the site and its surroundings. However, a Scenic Resource Evaluation/Visual Impact Assessment, which was prepared in December 2019, determined that the project would cause a noticeable visual impact. Two black walnut trees and at least five oleander bushes would be removed at location 4, and one oak tree would be removed at location 6. Additionally, seven agricultural trees would be removed at location 1, and one tree would be removed at location 2. Any vegetation that is damaged or removed from within the state right-of-way because of construction activities would be replaced. (This has been revised from “No Impact” in the draft environmental document.)

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 include lighting elements in an area where there is no lighting.

### 3.2.2 Agriculture and Forest Resources

#### *CEQA Significance Determinations for 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project, 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?

**Less Than Significant Impact—**See Chapter 2, Farmland, for a detailed farmland discussion. The project would impact 1.68 acres of land (revised

from 0.54 acre of right-of-way in the draft environmental document). The project would acquire 1.03 acres of right-of-way and would require 0.65 acre of temporary construction easements (revised from 0.43 acre in the draft environmental document).

Location 13 contains the largest amount of farmland that would be affected; approximately 0.47 acre of prime farmland and unique farmland under the Land Conservation Act would be converted to non-agricultural use. Approximately 0.21 acre would be used for temporary construction easements on both sides of the road at location 13 (revised from 0.20 acre from the draft environmental document).

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

**Less Than Significant Impact**—The purpose and need of this project are to reduce collisions and minimize collision severity involving errant vehicles leaving the traveled way and striking fixed objects. The Merced General Plan Agricultural Resources Element, Policy AG 2.9: Infrastructure Extension opposes work in areas designated for agricultural use "unless necessary to protect public health, safety, and welfare." The project is consistent with the Merced County General Plan and is supported by its listing in the Federal Transportation Improvement Program and the State Highway Operation and Protection Program.

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—**The project would not impact forest lands or timberlands.

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

**No Impact—**The project would not impact forest lands or timberlands.

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?

**No Impact**—The project would not involve other changes in the existing environment which, due to their location or nature, could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

### 3.2.3 Air Quality

***CEQA Significance Determinations for Air Quality***

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

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

**No Impact—**The project would not conflict with or obstruct implementation of the applicable air quality plan for the San Joaquin Valley Air Basin or the San Joaquin Valley Air Pollution Control District.

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?

**No Impact—**The project would not cause a cumulatively considerable net increase of any criteria pollutant. The project would extend culverts, install guardrail, and remove and replace headwalls at spot locations. Short-term air quality and pollutants would be temporary during construction.

c) Expose sensitive receptors to substantial pollutant concentrations?

**No Impact—**The project would not expose sensitive receptors to substantial pollutant concentrations. During construction, the project would generate air pollutants: temporary exhaust from construction equipment containing hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. The contractor would be required to comply with construction mitigation methods listed in Caltrans' Standard Specifications for Dust Control, which requires compliance with local air district pollution control requirements.

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

**No Impact—**The project would not create odors that would affect a substantial number of people because there are not many people who live in the project area. Construction equipment may temporarily generate air pollutants. The impacts would vary each day as construction progresses, and some homes close to the right-of-way may encounter dust and odors. Including Caltrans' Standard Specifications pertaining to dust control and dust palliative requirements in all construction contracts would effectively reduce and control emission impacts during construction.

### 3.2.4 Biological Resources

***CEQA Significance Determinations for Biological Resources***

Would the project:

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

**Less Than Significant with Mitigation Incorporated—**As discussed in the Threatened and Endangered Species section in Chapter 2, Caltrans determined that the project *"may affect, likely to adversely affect"* critical habitat for the giant garter snake, vernal pool fairy shrimp, vernal pool tadpole shrimp, and fairy shrimp. Caltrans also determined that the project *"may affect, not likely to adversely affect"* the California tiger salamander and its critical habitat, succulent (fleshy) owl's-clover and its critical habitat, and Greene's tuctoria and its critical habitat. Additionally, Caltrans determined that the project *"may affect, not likely to adversely affect"* the conservancy fairy shrimp, vernal pool tadpole shrimp, Colusa grass, hairy orcutt grass, and San Joaquin Valley orcutt grass. Avoidance, minimization, and mitigation measures would reduce project impacts to below significance.

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—**There would not be 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. As discussed in Chapter 2, Natural Communities section, the project is occupied by non-native grassland habitat, Valley oak trees, vernal pools, seasonal wetlands and swales, seasonal marshes, drainage basins, ephemeral drainages, culverts, ditches, agricultural areas, and undeveloped residential and commercial lots. Non-native grassland is mixed with critical habitat for the vernal pool fairy shrimp and vernal pool tadpole shrimp. Caltrans determined that the project *"may affect, not likely to adversely affect"* this critical habitat; avoidance, minimization, and mitigation measures would reduce the impacts to below significance.

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 with Mitigation Incorporated—**As discussed in the Wetlands section in Chapter 2, the project would permanently impact 0.32 acre of waters of the U.S.; 0.06 acre was delineated. A Section 1600 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife would be required for locations 4, 5, 6, and 13. A Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board would be required for locations 4, 5, 6, and 13. A Clean Water Act Section 404 Nationwide permit from the U.S. Army Corps of Engineers would be required for locations 4, 5, 6, and 13. Implementing avoidance, minimization, and mitigation measures would reduce impacts to below significance.

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?

**No Impact—**The project would not 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.

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

**No Impact—**The project is not in conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Merced County General Plan's Oak Conservation Policy directs that cutting existing trees should be minimized. The following text has been added since the draft environmental document: The number of trees being removed was reduced; only unavoidable trees would be affected.

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 Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that would be impacted by project construction.

### 3.2.5 Cultural Resources

#### *CEQA Significance Determinations for Cultural Resources*

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

**No Impact—**Within the Area of Potential Effects, seven historic-era resources were identified (revised from four historic-era resources in the draft environmental document). Four of these properties were previously evaluated and were determined not eligible for the National Register of Historic Places under any qualifying criteria (revised from two of these properties being previously evaluated in the draft environmental document). The State Historic Preservation Officer agreed with those findings, and those determinations remain valid. The other three historic features were evaluated for the current project and were determined not eligible for listing in the National Register of Historic Places (revised from two linear features in the draft environmental document).

Caltrans, per Section 106 Programmatic Agreement Stipulation IX.A, and as applicable to the Public Resources Code Section 5024 Memorandum of Understanding Stipulation IX.A.2 has determined that a Finding of No Historic Properties Affected is appropriate for this project because there are no historic properties within the Area of Potential Effects. Caltrans has determined that there are no historic resources within the project's Area of Potential Effects. The State Historic Preservation Officer in a letter dated February 2, 2020, agreed with these findings for the project (see technical studies bound separately). (Historic Property Survey Report, December 2019; Historic Resources Evaluation Report, December 2019) The above dates were updated since the draft environmental document.

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

**No Impact—**There are no known prehistoric or historic archaeological resources within the Archaeological Study Area. No new archaeological resources were identified during the archaeological survey for this project. (Archaeological Survey Report, October 2018)

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

**No Impact—**The project would not disturb any human remains, including those interred outside of dedicated cemeteries. If previously identified cultural materials are unearthed during construction, it is Caltrans' policy that work be stopped in that area until a qualified archaeologist can assess the significance of the find. If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities must stop in any area or nearby area suspected to overlie remains, and the local coroner must be contacted. Per California Public Resources Section 5097.98, if the remains are thought to be Native American, the coroner would notify the California Native American Heritage Commission, which would then notify the Most Likely Descendent.

### 3.2.6 Energy

(This section has been added since the draft environmental document)

***CEQA Significance Determinations for Energy***

Would the project:

a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

**No Impact**—The project does not include the addition of any energy-consuming resources (i.e., lights). Per Caltrans' Best Management Practices, newer or well-maintained equipment that is more energy-efficient would be used during construction. The amount of energy used by construction equipment during the project would be negligible.

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

**No Impact**—There would be no impact to state or local plans for renewable energy or energy efficiency.

### 3.2.7 Geology and Soils

***CEQA Significance Determinations for Geology and Soils***

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

**No Impact—**There is no potential for surface fault rupture to occur in the project area. The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving i, ii, iii and iv. Sources for this response include the California Geological Survey webpage, Faulting in California, the Merced County General Plan webpage, and the California Conservation webpage Data Viewer.

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?

**No Impact**—No faults were identified in the project area.

ii) Strong seismic ground shaking?

**No Impact**—Seismic hazard activities are low.

iii) Seismic-related ground failure, including liquefaction?

**No Impact**—There is no strong seismic ground shaking in the project area.

iv) Landslides?

**No Impact**—The following sentence has been added since the draft environmental document: The project area does not include a slope that would be at risk of a landslide.

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

**No Impact—**The project would not result in substantial soil erosion or the loss of topsoil. Construction would use a cut-and-fill method as well as landscape planting to reduce any soil erosion.

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 in a geologic unit or soil that is unstable or that would become unstable because of the project.

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

**No Impact—**The project is not on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), that would create substantial risks to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

**No Impact—**The project would not impact soils used for septic tanks or alternate wastewater disposal systems.

### 3.2.8 Greenhouse Gas Emissions

***CEQA Significance Determinations for Greenhouse Gas Emissions***

Would the project:

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

**Less Than Significant Impact—**While the project would cause greenhouse gas emissions during construction, it is expected that the project would not

result in any increase in operational greenhouse gas emissions, as supported by the analysis in Section 3.3, Climate Change.

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 would extend culverts, build headwalls, and install guardrail systems. It would not impact traffic flow or change the traffic capacity of the roadway. Therefore, the project would result in a less than significant impact to greenhouse gas emissions, as supported by the analysis in Section 3.3, Climate Change.

### 3.2.9 Hazards and Hazardous Materials

***CEQA Significance Determinations for Hazards and Hazardous Materials***

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

**No Impact—**The Caltrans Standard Special Provision pertaining to Treated Wood Waste would be added to the construction contract for the removal of existing guardrail.

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?

**No Impact—**An asbestos-containing material survey was completed in February 2019 and no asbestos was identified. The following sentence has been added since the draft environmental document: A survey for asbestos-containing materials and lead-based paint would be conducted before construction at locations 1 and 2.

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—**There are no schools within a quarter-mile of the project area.

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—**There are no Cortese List sites in the project area.

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 lies within Merced County's airport land use plan. Three airports surround the project area. The nearest airport—Gustine Municipal Airport—is about 1 mile south of the first culvert improvement area, which is outside the project limits. The Merced Regional Airport is about 1 mile south of State Route 140 in the city of Merced; no culvert work is proposed within the city of Merced. The Merced County Castle Airport is about 3 miles north of State Route 140. A local private airport—the Stevinson Strip Airport—sits about 1 mile north of State Route 140. The project, at spot locations in rural areas, would extend culverts, reconstruct headwalls, and install guardrail. The project would not result in a safety hazard for people living or working in the project area.

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

**No Impact—**The project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. During construction, at least one lane would always be open. (Transportation Management Plan Checklist, September 2018)

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

**No Impact—**The project would not expose people or structures to a significant wildland fire. The project area's land use is agricultural.

### 3.2.10 Hydrology and Water Quality

***CEQA Significance Determinations for Hydrology and Water Quality***

Would the project:

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

**No Impact—**The project would not violate any water quality standards or waste discharge requirements because Caltrans is required to reduce potential water quality impacts in the design and construction phases. With use of selected Best Management Practices, water quality would be protected, and the risk of accidental releases of oil, grease, and chemical pollutants would be reduced.

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

**No Impact—**The project would extend culverts, install guardrail, and reconstruct headwalls; it would not substantially deplete groundwater supplies or interfere substantially 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;

**No Impact—**The project would not result in substantial erosion or siltation because the project would not affect drainage patterns.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

**No Impact—**The project would extend culverts, install guardrail, and reconstruct headwalls, which would not substantially increase the rate or amount of surface runoff.

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

**No Impact—**The project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The project would not increase the volume of traffic on State Route 140; therefore the present runoff conditions would remain unchanged. Best Management Practices with Caltrans' Standard Provisions would help reduce impacts to runoff water during construction. The Caltrans Stormwater Unit would provide appropriate Best Management Practices for all stormwater concerns.

iv) Impede or redirect flood flows?

**No Impact—**The project would not affect hydrology that would impede or redirect flood flows. Project activities would not significantly impact the floodway opening because the project would extend culverts and not reduce the flow in the channels.

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

**No Impact—**The project would not cause inundation by seiche, tsunami, or mudflow because it is not near major bodies of water. The project area is outside the coastal zone and not in an area that is subject to sea-level rise.

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

**No Impact—**With the implementation of Best Management Practices, the project would not substantially degrade water quality.

### 3.2.11 Land Use and Planning

***CEQA Significance Determinations for Land Use and Planning***

Would the project:

a) Physically divide an established community?

**No Impact—**The project would not physically divide an established community. The project is on a roadside of a highway facility; additional right-of-way and temporary construction easements would be acquired from farmland and a railroad for the project.

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?

**No Impact—**The project would extend culverts, reconstruct headwalls, and install guardrail. It would not conflict with any applicable land use plans, an existing Habitat Conservation Plan, or a Natural Community Conservation Plan.

### 3.2.12 Mineral Resources

***CEQA Significance Determinations for Mineral Resources***

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

**No Impact—**The project would not 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. In Merced County, precious minerals and building material aggregate resources are ample and exceed projected demand, according to the Merced County General Plan.

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—**The project would not 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. See answer “a” above.

### 3.2.13 Noise

***CEQA Significance Determinations for Noise***

Would the project result in:

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?

**No Impact—**The project would not cause a substantial temporary or permanent increase in ambient noise levels. No adverse noise impacts from construction are expected. Construction noise would be short term, intermittent, and overshadowed by local traffic noise. Under Caltrans’ Noise Section 14-8.02 “Noise Control,” noise levels generated during construction should not exceed 86 decibels at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m. Noise would be monitored and controlled from the construction area. All equipment would have sound control devices that are no less effective than what is provided on the original equipment. No equipment would have an unmuffled exhaust. The project is not expected to expose persons to or generate noise levels in excess of noise standards. Construction noise impacts may vary for different areas within the project limits. Construction noise impacts may also vary depending on the construction activity. Caltrans, along with the contractor, would implement measures to minimize the temporary noise impacts from construction. Temporary noise impacts during construction would be handled by the Caltrans Standard Specifications Section 14-8.02 Noise Control.

b) Generation of excessive groundborne vibration or groundborne noise levels?

**No Impact—**The project would not generate excessive groundborne vibration or groundborne noise levels. As directed by Caltrans, the contractor would implement the appropriate additional noise mitigation measures, such as turning off idling equipment, rescheduling construction activity, and installing acoustic barriers around stationary construction noise sources.

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 sits within Merced County's airport land use plan. Three airports surround the project area. The nearest airport—Gustine Municipal Airport—is about 1 mile south of the first culvert improvement area, which is outside of the project limits. The Merced Regional Airport is about 1 mile south of State Route 140 in the city of Merced. The Merced County Castle Airport is about 3 miles north of State Route 140. A local private airport—Stevinson Strip Airport—is about 1 mile north of State Route 140. The project would not expose people living or working in the project area to excess noise levels.

### 3.2.14 Population and Housing

#### *CEQA Significance Determinations for Population and Housing*

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

**No Impact—**The project would not induce substantial population growth in an area, either directly or indirectly. The project would provide roadside safety improvements throughout the project limits and is not a capacity-increasing project.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

**No Impact—**The project would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing areas. The proposed right-of-way acquisition would occur at three culvert locations. The project would provide roadside safety improvements throughout the project limits.

### 3.2.15 Public Services

#### *CEQA Significance Determinations for Public Services*

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?

**No Impact**—Prior to construction, Caltrans and the contractor would, per Caltrans' Standard Specifications, carefully plan any necessary lane closures

and use proper traffic control devices. The project would not affect public response services within the project area.

Police protection?

**No Impact**—Prior to construction, Caltrans and the contractor would, per Caltrans' Standard Specifications, carefully plan any necessary lane closures and use proper traffic control devices. The project would not affect public response services within the project area.

Schools?

**No Impact—**According to the Transportation Management Plan Checklist prepared by Caltrans, the contractor would maintain access to all public services at all times.

Parks?

**No Impact**—The project would not increase or decrease the use of existing parks or recreational facilities.

Other public facilities?

**No Impact**—The project would not trigger the need for new or changed public facilities of any type. According to the Transportation Management Plan Checklist prepared by Caltrans, the contractor would maintain access to all businesses, homes, and public services at all times. With these standard specifications and lane closure strategies, the project would not affect government facilities.

### 3.2.16 Recreation

***CEQA Significance Determinations for Recreation***

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 project 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. No park or recreational facility would be impacted as a result of the project.

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?

**No Impact—**The project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse

physical effect on the environment. The project is a roadside safety improvement project focusing on extending culverts, installing guardrail, and reconstructing headwalls.

### 3.2.17 Transportation

***CEQA Significance Determinations for Transportation***

Would the project:

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

**No Impact**—The project would not conflict with any traffic circulation plan or policy.

b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

**No Impact**—The project would have no impact on vehicle miles traveled and is consistent with CEQA Guidelines Section 15064.3, subdivision (b).

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

**No Impact—**The project would not increase hazards due to a design feature. The project is a roadside safety improvement project focusing on extending culverts, installing guardrail, and reconstructing headwalls.

d) Result in inadequate emergency access?

**No Impact—**The project would not result in inadequate emergency access. The project would be built with one-lane traffic control. There would be night work for some aspects of the project. During the construction phase, Caltrans would provide adequate emergency access by implementing a Traffic Management Plan with Best Management Practices. A Caltrans public information officer would inform the public before construction.

### 3.2.18 Tribal Cultural Resources

***CEQA Significance Determinations for 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

**No Impact—**Caltrans determined that there are no resources 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).

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

**No Impact—**California Native American Heritage Commission consultation was initiated, by letter, in March 2019, to determine if any cultural properties were known to exist within or next to the project area. In response, the California Native American Heritage Commission stated that its files failed to indicate the presence of Native American cultural resources within or next to the project. The California Native American Heritage Commission provided a list of tribal contacts who may be interested in the project. Native American tribes were consulted by letter, in late March 2019, in accordance with Assembly Bill 52 of the California Environmental Quality Act. Eleven of 13 Native American contacts responded to Caltrans' consultation letters. One of the Native American contacts requested final documentation, and another contact requested to be informed of the progress of studies. According to the Archaeological Survey Report, October 2018, no known prehistoric or historic archaeological resources were found within the project limits. (See Chapter 4, Comments and Coordination).

### 3.2.19 Utilities and Service Systems

***CEQA Significance Determinations for Utilities and Service Systems***

Would the project:

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

**No Impact—**The project would not require new or additional discharge of water, so it would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. The project would have no impact on wastewater treatment facilities. The project would extend existing culverts, remove and reconstruct headwalls, and remove existing guardrail

and install guardrail, but this work would not cause significant environmental effects.

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 have no effect on the need for water supplies.

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 would have no impact on wastewater treatment needs.

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?

**No Impact—**The project would not generate excess solid waste.

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

**No Impact—**The project would comply with all solid waste regulations.

### 3.2.20 Wildfire

(The following section has been added since the draft environmental document)

#### *CEQA Significance Determinations for Wildfire*

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

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

**No Impact—**Merced County states in its emergency operations plan that an evacuation plan is arranged based on the location of a disaster and its proximity to hospitals in areas/regions not impacted by a disaster. The project would not affect this emergency plan because the project would only have one lane closure.

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 is not within a state responsibility area or lands classified as very high fire hazard.

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 not require the installation or maintenance of any associated infrastructure and would not exacerbate fire risk.

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?

**No Impact—**Slopes within the project area do not pose a risk to people or structures because they are along the sides of canals and culverts and are not near any structures or homes.

### 3.2.21 Mandatory Findings of Significance

(The following section has been added since the draft environmental document)

#### *CEQA Significance Determinations for Mandatory Findings of Significance*

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

**Less Than Significant with Mitigation Incorporated—**The project would not 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. Impacts to wetlands and other waters and threatened and endangered species would be mitigated below significance. See Chapter 2, Biological Environment.

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.)

**No Impact—**The project would not have any cumulative impacts.

c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

**No Impact—**The project would not have any environmental impacts that would cause substantial adverse effects on human beings.

## 3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are concerned mostly with the emissions of greenhouse gases generated by human activity, including carbon dioxide (CO2), methane (CH4), nitrous oxide (N20), tetrafluoromethane (CF4), hexafluoroethane (C2F6), sulfur hexafluoride (SF6), HFC-23 (fluoroform), HFC-134a (1, 1, 1, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of greenhouse gas emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of greenhouse gas emissions. The dominant greenhouse gas emitted is carbon dioxide, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." "Greenhouse gas mitigation" covers the activities and policies aimed at reducing greenhouse gas emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" is concerned with planning for and responding to

impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

### 3.3.1 Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

#### *Federal*

To date, no national standards have been established for nationwide mobile-source greenhouse gas reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and greenhouse gas emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 U.S. Code Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. The Federal Highway Administration, therefore, supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices. This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.” Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process would assist in decision-making and improve efficiency at the program level and would inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been made at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the U.S. The Energy Policy Act of 1992 consists of 27 titles detailing various measures designed to lessen the nation’s dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of the Energy Policy Act of 1992 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required

in certain federal fleets beginning in fiscal year 1993. The main goal of the program is to cut petroleum use in the U.S. by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 U.S. Code Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the U.S. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S.

The U.S. Environmental Protection Agency authority to regulate greenhouse gas emissions stems from the U.S. Supreme Court decision in Massachusetts v. Environmental Protection Agency (2007). The Supreme Court ruled that greenhouse gases meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the court's ruling, the U.S. Environmental Protection Agency finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing act and the Environmental Protection Agency's assessment of the scientific evidence that form the basis for the Environmental Protection Agency's regulatory actions.

The U.S. Environmental Protection Agency in conjunction with the National Highway Traffic Safety Administration issued the first of a series of greenhouse gas emission standards for new cars and light-duty vehicles in April 2010, and significantly increased the fuel economy of all new passenger cars and light trucks sold in the U.S. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because the National Highway Traffic Safety Administration cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which the National Highway Traffic Safety Administration,

Environmental Protection Agency, and California Air Resources Board will decide on the Corporate Average Fuel Economy and greenhouse gas emissions standard stringency for model years 2022-2025. The National Highway Traffic Safety Administration has not formally adopted standards for model years 2022 through 2025. However, the Environmental Protection Agency finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Donald Trump ordered the Environmental Protection Agency to reopen the review and reconsider the mileage target.

The National Highway Traffic Safety Administration and Environmental Protection Agency issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce carbon dioxide emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018-2027 vehicles.

### *State*

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing greenhouse gas emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this order is to reduce California's greenhouse gas emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and Senate Bill 32 in 2016.

Assembly Bill 32, Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: Assembly Bill 32 codified the 2020 greenhouse gas emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The legislature also intended that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires the California Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The California Air Resources Board re-adopted the low carbon fuel standard regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 greenhouse gas reduction goals.

Senate Bill 97, Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the governor's Office of Planning and Research to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing greenhouse gas emissions. The amendments became effective on March 18, 2010.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a "Sustainable Communities Strategy" that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the state's long-range transportation plan to meet California's climate change goals under Assembly Bill 32.

Executive Order B-16-12 (March 2012): This order required state entities under the direction of the governor, including the California Air Resources Board, the California Energy Commission, and the California Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015): This order established an interim statewide greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets. It also directs the California Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalents. Finally, it requires the California Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016: This bill codifies the greenhouse gas reduction targets established in Executive Order B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

### 3.3.2 Environmental Setting

In 2006, the legislature passed the California Global Warming Solutions Act of 2006 (Assembly Bill 32), which created a comprehensive, multi-year program to reduce greenhouse gas emissions in California. Assembly Bill 32 required the California Air Resources Board to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020. The Scoping Plan was first approved by the California Air Resources Board in 2008 and must be updated every 5 years. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in Executive Order B-30-15 and Senate Bill 32.

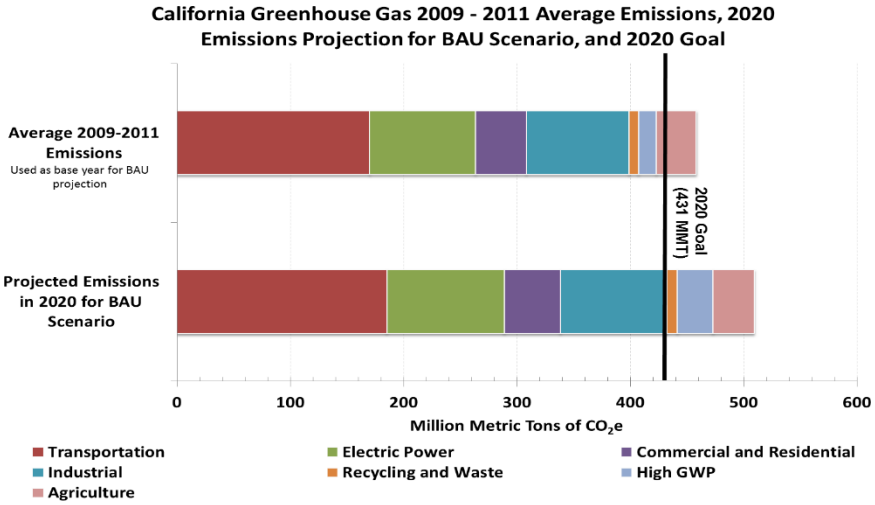
The Assembly Bill 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce greenhouse gas emissions. As part of its supporting documentation for the updated Scoping Plan, the California Air Resources Board released the greenhouse gas inventory for California. The California Air Resources Board is responsible for maintaining and updating California's Greenhouse Gas Inventory per Health and Safety Code Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 3-1 represent a business-as-usual scenario assuming none of the Scoping Plan measures are implemented. The 2020 business-as-usual emissions estimate assists the California Air Resources Board in demonstrating progress toward meeting the 2020 goal of 431 million metric tons of carbon dioxide equivalents. The 2018 edition of the greenhouse gas emissions inventory found total California emissions of 429 million metric tons of carbon dioxide equivalents for 2016.

The 2020 business-as-usual emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 business-as-usual scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 million metric tons of carbon dioxide equivalents total). With these reductions in the baseline, estimated 2020

statewide business-as-usual emissions are 509 million metric tons of carbon dioxide equivalents.

**Figure 3-1 2020 Business as Usual (BAU) Emissions Projection 2014 Edition**




https://www.arb.ca.gov/cc/inventory/data/bau.html

### 3.3.3 Project Analysis

An individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of greenhouse gas. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." (CEQA Guidelines Sections 15064(h)(1) and 15130) To make this determination, you must compare the incremental impacts of the project 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 to make this determination is a difficult, if not impossible, task.

Greenhouse gas emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential greenhouse gas emissions related to the project.

#### *Operational Emissions*

The purpose of this project is to reduce the potential for and severity of traffic collisions on State Route 140 within the project limits by improving the clear recovery zone for the traveling public. The project would improve safety and drainage along State Route 140 by removing and reconstructing headwalls within the clear recovery zone, replacing guardrail, and building culvert

extensions. Although fill would be installed to support the extended culverts at some locations, and shoulders would be widened, the purpose of the project is to remove obstacles from the clear recovery zone. The project would not add vehicle capacity or increase vehicle miles traveled. Accordingly, it is not expected to cause any increase in operational greenhouse gas emissions.

### *Construction Emissions*

Construction greenhouse gas emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

Additionally, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions for the project were calculated using the Caltrans Construction Emissions Tool spreadsheet. The estimated construction emissions were 289 metric tons of carbon dioxide equivalents, and the project is expected to take about five months (150 working days) to complete.

Caltrans Standard Specifications Section 7-1.02C, Emissions Reduction, a part of all construction contracts, requires the contractor to certify awareness of, and comply with, the emissions reduction regulations mandated by the California Air Resources Board. Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes of the California Air Resources Board and the local air pollution control district. Caltrans requires that contractors comply with all applicable local air district requirements that apply to transportation projects if they are more stringent than state air pollution control requirements per California Government Code Section 11017. Standard construction Best Management Practices for air quality would also apply. Such air pollution control measures can also help reduce construction greenhouse gas emissions.

## 3.3.4 CEQA Conclusion

Even though the project would generate greenhouse gas emissions during construction, the project is not expected to generate an increase in operational greenhouse gas emissions. Caltrans is committed to implementing measures to help reduce greenhouse gas emissions. These are outlined in the following section.

### *Greenhouse Gas Reduction Strategies*

*Statewide Efforts*

To further the vision of California's greenhouse gas reduction targets outlined in Assembly Bill 32 and Senate Bill 32, then-Governor Edmund G. Brown Jr. identified key climate change strategy pillars (concepts). See Figure 3-2.

**Figure 3-2 Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals**


These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 greenhouse gas emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy-efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, Safeguarding California.

The transportation sector is integral to the people and economy of California. To achieve greenhouse gas emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from the transportation and goods movement activities. Greenhouse gas emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and a reduction of vehicle miles traveled. One of former Governor Edmund G. Brown Jr.'s key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Former Governor Edmund G. Brown Jr. called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

### *Caltrans Activities*

Caltrans continues to be involved on the governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Executive Order B-30-15, issued in April 2015, and Senate Bill 32 (2016), set a new interim target to cut greenhouse gas emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

#### *California Transportation Plan (CTP 2040)*

The California Transportation Plan is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. The plan defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

Senate Bill 391 (Liu 2009) requires the California Transportation Plan to meet California's climate change goals under Assembly Bill 32. Accordingly, the California Transportation Plan 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While Metropolitan Planning Organizations have primary responsibility for identifying land use patterns to help reduce greenhouse gas emissions, California Transportation Plan 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

#### *Caltrans Strategic Management Plan*

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce greenhouse gas emissions, among other goals. Specific performance targets in the plan that will help to reduce greenhouse gas emissions include the following:

- Increasing percentage of non-auto mode share
- Reducing vehicle miles traveled per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) greenhouse gas emissions

*Funding and Technical Assistance Programs*

In addition to developing plans and performance targets to reduce greenhouse gas emissions, Caltrans also administers several funding and technical assistance programs that have greenhouse gas reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (2013).

The Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012), is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

*Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

*Project-Level Greenhouse Gas Reduction Strategies*

The following measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project:

- Caltrans Standard Specification 14-9.02 requires contractors to comply with all state, local, California Air Resources Board, and air district rules, regulations, ordinances, and statutes. Measures that reduce construction vehicle emissions, such as idling restrictions and ensuring engines are properly tuned and maintained, may also help reduce greenhouse gas emissions.
- A transportation management plan will be developed and implemented to minimize traffic delays and associated idling emissions resulting from periods of one-way traffic control during construction.

*Adaptation Strategies*

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

### *Federal Efforts*

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the Council on Environmental Quality, the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration, released its interagency task force progress report on October 28, 2011, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation issued a U.S. Department of Transportation Policy Statement on Climate Adaptation in June 2011, committing to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of the Department of Transportation in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services, and operations remain effective in current and future climate conditions."

To further the Department of Transportation Policy Statement, on December 15, 2014, the Federal Highway Administration issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*). This directive established a Federal Highway Administration policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The Federal Highway Administration will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation's transportation systems.

The Federal Highway Administration has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.

### *State Efforts*

On November 14, 2008, former Governor Arnold Schwarzenegger signed Executive Order S-13-08, which directed a number of state agencies to address California's vulnerability to sea-level rise caused by climate change. This order set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to build projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with

information on local uplift and subsidence, coastal erosion rates, predicted higher high-water levels, and storm surge and storm wave data.

Former Governor Arnold Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report), was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates, and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems, and a discussion of future research needs regarding sea-level rise.

In response to Executive Order S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (December 2009), which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Former Governor Edmund G. Brown Jr. enhanced the overall adaptation planning effort by signing Executive Order B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing Executive Order B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

Executive Order S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document*, produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to sea-level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency

and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working toward identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in Executive Order B-30-15.

The project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

Design plans indicate that culvert extensions would be built of corrugated steel pipe or concrete. These materials would be resistant to damage from wildfires that could occur under potential future drier and hotter conditions.

# Chapter 4 Comments and Coordination

This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination. Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements.

Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, intergovernmental coordination meetings, and agency meetings. Coordination dates after April 2019 have been added since the draft environmental document.

*Natural Resources Conservation Service Coordination*

March 1, 2019—One Farmland Conservation Impact Rating form for all project locations was sent to Jarrod Martin at the Natural Resources Conservation Service for evaluation. Mr. Martin assigned this evaluation to Resource Conservationist Jennifer Foster.

March 7, 2019—Farmland Conservation Impact forms were completed by Jennifer Foster of the Natural Resources Conservation Service. The forms reflect that the project area contains prime, unique, statewide, or locally important farmland. See the technical studies bound separately. For all locations, the Total Site Assessment Points for the Natural Resources Conservation Service AD-1006 forms were under the 160-point threshold. Therefore, no further coordination with the Natural Resources Conservation Service is required.

August 8, 2019—Acreage of direct farmland impacts decreased from 0.54 acre to 0.53 acre, and the indirect impacts increased from 0.61 acre to 0.64 acre. Jennifer Foster of the Natural Resources Conservation Service confirmed that new Farmland Conservation Impact forms would not be necessary because the changes are insignificant.

*U.S. Fish and Wildlife Service*

November 30, 2017—Caltrans' biology staff obtained a species list for the project quadrangles using the U.S. Fish and Wildlife Service Information for Planning and Consultation tool.

December 20, 2017—Caltrans' biology staff submitted a request for approval to the U.S. Fish and Wildlife Service Recovery Permit coordinator, Sarah Markegard, for authorization to conduct protocol wet season vernal pool branchiopod surveys in the action area of location 13.

January 13, 2018—Ms. Markegard provided Caltrans' biology staff with approval to conduct wet season vernal pool branchiopod surveys in location 13.

May 25, 2018—A letter was mailed to the U.S. Fish and Wildlife Service in Sacramento advising the agency of Caltrans' project. U.S. Fish and Wildlife Service Preserve Manager Kim Forrest responded on June 1, 2018, indicating that Caltrans should limit itself to its right-of-way and not enter the preserve at location 3. A teleconference was held between federal and state agencies regarding Section 4(f) evaluations. As the project progressed, Caltrans reduced the scale of the project at location 3 by removing the culvert replacement component and performing only guardrail work so no encroachment onto the preserve would occur. Kim Forrest was made aware of the project change.

December 21, 2018—Caltrans' biology staff updated the official species list using the U.S. Fish and Wildlife Service Information for Planning and Consultation tool.

March 2019—A Biological Assessment was submitted to Jen Schofield with the U.S. Fish and Wildlife Service.

June 26, 2019—Caltrans' biology staff updated the official species list using the U.S. Fish and Wildlife Service Information for Planning and Consultation tool.

September 2019—A Biological Opinion was received from the U.S. Fish and Wildlife Service on September 6. Consultation was re-initiated on September 12 due to changes in expected work windows, causing potential impacts to the giant garter snake.

November 2019—Consultation with the U.S. Fish and Wildlife Service was re-initiated to add locations 1 and 2.

April 15, 2020—A Biological Opinion was received from the U.S. Fish and Wildlife Service on April 15.

*National Marine Fisheries Service*

November 26, 2018—Caltrans' biology staff acquired an official species list from the National Marine Fisheries Service.

June 26, 2019—Caltrans' biology staff acquired an official species list from the National Marine Fisheries Service.

September 5, 2019—Caltrans' biology staff acquired an updated official species list from the National Marine Fisheries Service.

*California Department of Fish and Wildlife*

September 12, 2018—Caltrans' biology staff contacted California Department of Fish and Wildlife liaison Steven Hulbert, via email, asking about which culverts may be under jurisdiction of the California Department of Fish and Wildlife.

September 18, 2018—Mr. Hulbert replied stating that the California Department of Fish and Wildlife would take jurisdiction over locations 3, 4, 5, 6, 9, 11, and 13.

May 1, 2019—Caltrans' biology staff acquired a species list from the California Department of Fish and Wildlife.

*California Native Plant Society*

August 28, 2019—Caltrans' biology staff acquired a species list from the California Native Plant Society.

*State Historic Preservation Officer*

November 2018—Caltrans' cultural resources staff initiated consultation with the State Historic Preservation Officer on two cultural resources. Caltrans requested concurrence that the two linear features be determined not eligible for listing in the National Register of Historic Places.

December 4, 2018—The State Historic Preservation Officer agreed with Caltrans' findings for this project. A copy of the concurrence letter can be found in the technical studies bound separately.

December 12, 2019—Caltrans' cultural resources staff initiated consultation with the State Historic Preservation Officer on the Sullivan Extension Canal. Caltrans requested concurrence that the canal be determined not eligible for the National Register of Historic Places.

February 4, 2020—The State Historic Preservation Officer agreed with Caltrans' findings for this project. A copy of the concurrence letter can be found in the technical studies bound separately.

*California Native American Heritage Commission and Native American Tribe Coordination*

March 22, 2017—Native American consultation was initiated through written correspondence with the California Native American Heritage Commission, requesting a search of its files to determine if any cultural properties were known to exist within or next to the project area. The names of Native American individuals or group representatives who may be interested in the project were also requested.

March 24, 2017—The California Native American Heritage Commission responded to Caltrans' request stating that its files failed to indicate the presence of Native American cultural resources. The California Native American Heritage Commission provided a list of contacts who may be interested in the project as well as recommendations for further tribal consultation:

- Ms. Lois Martin, Chairperson, Southern Sierra Miwuk Nation
- Mr. Robert Ledger, Sr., Chairperson, Dumna Wo-Wah Tribal Government
- Ms. Kerri Vera, Environmental, Tule River Indian Tribe
- Ms. Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe
- Ms. Jennifer Ruiz, Chairperson, Picayune Rancheria of Chukchansi Indians
- Mr. Neil Peyron, Chairperson, Tule River Indian Tribe
- Mr. Valentin Lopez, Chairperson, Amah Mutsun Tribal Band
- Ms. Silvia Burley, Chairperson, California Valley Miwok Tribe
- Ms. Lorrie Planas, Chairperson, Choinumni Tribe
- Mr. Jerry Brown, Chairperson, Chowchilla Tribe of Yokuts

April 7, 2017—Caltrans' cultural resources staff received a response from Tara C. Estes-Harter, the cultural resources specialist for the Picayune Rancheria of Chukchansi Indians. She stated that the tribe was unaware of any undocumented tribal cultural resources at any of the project locations. Ms. Estes-Harter would like to be informed of any Native American cultural resources found, especially from any ground disturbance.

May 22, 2018—Follow-up emails to consultation letters were sent to:

- Mr. Edward Ketchum, Tribal Member, Amah Mutsun Tribal Band
- Ms. Lois Martin, Chairperson, Southern Sierra Miwuk Nation
- Ms. Kerri Vera, Environmental, Tule River Indian Tribe
- Ms. Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe
- Mr. Neil Peyron, Chairperson, Tule River Indian Tribe
- Mr. Robert Ledger, Sr., Chairperson, Dumna Wo-Wah Tribal Government
- Mr. Valentin Lopez, Chairperson, Amah Mutsun Tribal Band
- Ms. Silvia Burley, Chairperson, California Valley Miwok Tribe
- Ms. Lorrie Planas, Chairperson, Choinumni Tribe
- Mr. Jerry Brown, Chairperson, Chowchilla Tribe of Yokuts

There have been no responses from 11 of the 13 Native American contacts.

May 30, 2018—Edward Ketchum, of the Amah Mutsun Tribal Band, replied via email. He was unaware of any specific cultural sites along the current State Route 140 alignment. He suggested that Caltrans contact Amah Mutsun Tribal Band Chairperson Val Lopez if Native American monitoring is required during project-related activities. Mr. Ketchum requested copies of the final documents for the project.

October 2018—Ms. Estes-Harter and Mr. Ketchum were kept informed of the progress of studies via email and were provided with digital and physical copies of cultural documents.

*Draft Environmental Document Circulation/Opportunity for a Public Hearing*

Caltrans circulated the draft environmental document for a 30-day public review and comment period from May 31, 2019, to June 29, 2019.

A public notice was placed in the Merced Sun-Star on May 31, 2019, advertising the availability of the draft environmental document for comment and offering the opportunity for a public hearing.

There were no comments or requests for a public hearing during the public comment period.

# Chapter 5 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

Myles Barker, Editorial Specialist. B.A., Mass Communication and Journalism, California State University, Fresno; 5 years of writing and editing experience. Contribution: Technical Editor.

Jon L. Brady, Associate Environmental Planner/Architectural Historian. M.A., History, California State University, Fresno; B.A., Political Science and Anthropology; more than 30 years of experience as a consulting archaeologist and historian. Contribution: Architectural History.

Benjamin Broyles, Senior Environmental Planner. B.A., Anthropology, University of California, Santa Cruz; 18 years of cultural resources management experience. Contribution: Archaeology.

Phong Duong, Associate Environmental Planner. B.S., Environmental/Health Science, California State University, Fresno; 5 years of transportation planning experience and 9 years of environmental planning experience. Contribution: Final Environmental Document.

Cassidy Ellis, Environmental Planner. B.A., Geography, California State University, Fresno; less than a year of environmental planning experience. Contribution: Final Environmental Document.

Jacob Fleener, Environmental Planner (Natural Sciences). MBA, Keller Graduate School; B.S., Biology, California State University, Fresno; 2 years of biology experience. Contribution: Natural Environment Study and Biological Assessment.

Rogerio Leong, Engineering Geologist. B.S., Geology, University of Sao Paulo, Brazil; 17 years of environmental site assessment and investigation experience. Contribution: Water Quality Assessment.

Joseph Llanos, Graphic Designer III. B.A., Graphic Design, California State University, Fresno; 20 years of visual design and public participation experience. Contribution: Graphic Designer.

Judith Lopez, Associate Environmental Planner. B.S., Business Administration, California State University, Fresno; 20 years of environmental planning experience. Contribution: Initial Study with Proposed Mitigated Negative Declaration.

Jennifer Lugo, Senior Environmental Planner. M.A., History, California State University, Fresno; B.A., History, Minor in Political Science, California

State University, Fresno; 14 years of environmental planning experience. Contribution: Environmental Branch Chief.

Kendra Reif, Associate Environmental Planner (Generalist and Air Quality Specialist). MPA, California State University, Fresno; B.A., Political Science, University of Nevada, Reno; 3 years of transportation and environmental planning experience; 2 years of air quality analysis experience. Contribution: Air Quality Report.

Richard C. Stewart, Engineering Geologist, P.G., B.S., Geology, California State University, Fresno; more than 30 years of hazardous waste and water quality experience; 17 years of paleontology/geology experience. Contribution: Paleontological Identification Report.

Sylvère CM Valentin, Associate Environmental Planner (Archaeology). M.A., Anthropology, Forensic Anthropology Certificate, California State University, Los Angeles; B.A., Business Administration, Minor Asian Pacific Studies, Loyola Marymount University; 19 years of experience in California archaeology and cultural resource management. Contribution: Historic Property Survey Report and Archaeological Survey Report.

Philip Vallejo, Office Chief. B.A., History, California State University, Fresno; 11 years of experience in environmental compliance. Contribution: Environmental Office Chief.

# **Appendix A** Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

**DEPARTMENT OF TRANSPORTATION**
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

*Making Conservation a California Way of Life.*

November 2019

**NON-DISCRIMINATION POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

*"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"*

# **Appendix B** Avoidance, Minimization and/or Mitigation Summary

To be sure that all environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record that follows) would be implemented.

During project design, avoidance, minimization, and/or mitigation measures would be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits would be obtained before the implementation of the project. During construction, environmental and construction/engineering staff would ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring would take place, as applicable.

Because the following Environmental Commitments Record is a draft, some fields have not been completed but would be filled out as each measure is implemented. Some measures may apply to more than one resource area. Duplicated or redundant measures have not been included in this Environmental Commitments Record.

### ***Biological Resources***

*Wetlands and Other Waters*

The following permits would be acquired for the project:

- A Section 1600 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife would be needed for locations 4, 5, 6, and 13.
- A Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board would be needed for locations 4, 5, 6, 8, and 13.
- A Clean Water Act Section 404 Nationwide permit from the U.S. Army Corps of Engineers would be required for locations 4, 5, 6, 8, and 13.

The following avoidance and minimization measures would be implemented for the project:

- A Spill Prevention Plan would be prepared and would describe the measures to be taken to minimize the risk of fluids or other materials used during construction—oils, transmission and hydraulic fluids, cement, and fuel—from entering streams or contaminating nearby riparian areas. A

cleanup protocol would be developed before construction starts and would be implemented in case a spill occurs.

- Stockpiling materials, including portable equipment, vehicles, and supplies (e.g., chemicals) would be restricted to the designated construction staging areas, not including any riparian and wetland areas.
- Construction activities would comply with all construction site Best Management Practices specified in the Stormwater Pollution Prevention Plan.
- Merced Irrigation District would move its own distribution system outside the clear recovery zone at location 11. Caltrans would coordinate with the Merced Irrigation District to ensure proper permitting is obtained for location 11.

A U.S. Army Corps of Engineers Clean Water Act Section 404 permit would be obtained to improve water quality. Measures would include rock slope protection and the removal of invasive plant species. In addition, a Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board would be needed to provide no loss of waters of the U.S. at this location. A Section 1600 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife would be required.

Measures that would be in place for location 11 include:

- Pre-construction surveys for migratory bird surveys.
- A worker environmental awareness training for construction staff.

*Plant Species*

The following measures would be implemented for all plant species discussed in Chapter 2:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.

- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federal, state-listed, or rare species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

With the implementation of avoidance and minimization efforts, and no impacts expected, no compensatory mitigation is proposed.

*Threatened and Endangered Species*

The following avoidance and minimization measures would be implemented for the following critical habitat and species.

*Critical Habitat*

Work would be restricted to the minimal amount necessary to complete the project so that the construction footprint would have the least amount of disturbance to species and their habitats, while also using environmentally sensitive area fencing to reduce potential disturbances.

Aquatic resources next to the edge of the right-of-way found to be suitable for the vernal pool fairy shrimp would be excluded before construction starts by Environmentally Sensitive Area fencing. Access, egress, and ground-disturbing activities would be sited to avoid vernal pools, where feasible. If construction activities impact the integrity of pool hydrology within the micro-watershed, then compensation may be required for that pool, which would be determined during consultation with the U.S. Fish and Wildlife Service. Compensatory mitigation ratios may be higher in areas designated as critical habitat than in non-critical habitat areas.

Compensatory mitigation would be required for unavoidable effects to critical habitat. This would require consultation with the U.S. Fish and Wildlife Service to determine appropriate compensatory ratios, which may include:

- Purchasing conservation bank credits from a U.S. Fish and Wildlife Service-approved bank—when made available— for vernal pool fairy shrimp.
- Restoring habitat on protected land, which may include Natural Community Conservation Plans or Habitat Conservation Plans.
- Establishing new habitat by permittee-responsible mitigation through the purchase of mitigation lands or changes in current land practices to augment the existing nearby natural landscape.

Compensatory mitigation ratios may be higher in areas designated as critical habitat than non-critical habitat areas.

*California Tiger Salamander*

With the implementation of avoidance and minimization measures, no permanent or temporary impacts would occur to the California tiger salamander; no compensatory mitigation is proposed. The following measures have been included in the project to protect this species only at location 13:

- Biological monitoring and pre-construction surveys would occur to protect any migrating California tiger salamanders during the migration season, which is from November 1 to May 31.
- Environmentally sensitive area exclusion fencing would be installed around potential breeding ponds to prevent any individuals from entering the work area.
- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- Areas next to but outside the work area would be protected with brightly colored, dual-purpose environmentally sensitive area fencing to prevent unnecessary disturbances to habitat and/or species. The environmentally sensitive area fencing would exclude California tiger salamanders and be applied to off-site areas next to the project footprint that contain suitable aquatic features. A qualified biologist would oversee the installation and would visit the site weekly to ensure that the fencing is in good working condition.
- If a 70 percent or greater chance of rainfall is predicted within 24 hours of a project activity, a qualified biologist would survey the project site for the presence of migrating California tiger salamanders before construction starts each day that rain is forecasted.

- No project work that could impact migrating California tiger salamanders would occur during or within 48 hours following significant rain events, defined as ¼-inch or more of rain in a 24-hour period.
- For work conducted during the migration season, which is from November 1 to May 31, a qualified biologist would survey active work areas (including access roads) in the morning, following measurable precipitation that measures less than ¼-inch. Construction may not start until the biologist has confirmed that no California tiger salamanders are in the work area.
- Trenches greater than 6 inches deep would be required to be covered or have an escape ramp present. These would be checked daily for trapped California tiger salamanders and other wildlife. Before trenches are filled, they would be inspected thoroughly for trapped wildlife.
- Any pipes or culverts stored on-site must be capped to prevent entry by a California tiger salamander. Pipes must be inspected before they are installed to ensure that California tiger salamanders have not taken cover inside. If any California tiger salamanders are found on pipes or culverts, the assigned Caltrans biologist would be notified.
- Vehicle travel would be limited to established roadways unless otherwise designated. Any travel beyond the paved highway would adhere to a 20-mile-per-hour daytime speed limit and 10-mile-per-hour nighttime speed limit.
- Areas that would be temporarily impacted due to construction would be seeded with a native seed mix once construction is complete.

No compensatory mitigation is proposed for the California tiger salamander or designated critical habitat because the channel that the project would impact is not suitable breeding habitat and does not contain all the necessary primary constituent elements to support the species.

*Giant Garter Snake*

The U.S. Fish and Wildlife Service developed the following measures that would be implemented to avoid and minimize effects to the giant garter snake only at locations 3-6:

- Since construction would occur during the inactive season for the giant garter snake, which is from October 2 to April 30, Caltrans proposes to also compensate for temporary impacts to potential giant garter snake habitat.
- A qualified biologist would conduct pre-construction surveys to identify areas that have the potential to encounter a giant garter snake.
- Before work starts, silt fencing would be installed around the project limits to prevent giant garter snakes from entering the work area.

- There would be a biological monitor present during any initial clearing and grubbing activities in areas that have the potential to encounter a giant garter snake.
- Construction personnel would participate in a worker environmental awareness program approved by the U.S. Fish and Wildlife Service. A qualified biologist would inform all construction personnel about the life and history of the giant garter snake, how to identify the species and its habitats, what to do if a giant garter snake is encountered during construction activities, as well as explain the state and federal laws that pertain to the giant garter snake.
- Standard construction Best Management Practices would be implemented throughout construction to avoid and minimize adverse effects to water quality within the project impact area.
- If a live giant garter snake is encountered during construction activities, the biological monitor would do the following:
    - Stop construction activity in the vicinity of the giant garter snake.
    - Monitor the giant garter snake and allow it to leave on its own.
    - The monitor would remain in the area for the remainder of the workday to make sure that the giant garter snake is not harmed or that it leaves the site and does not return. Escape routes for the giant garter snake would be determined in advance of construction. If the giant garter snake does not leave on its own within one working day, further consultation with the U.S. Fish and Wildlife Service would be conducted.

Unavoidable effects to the giant garter snake would require consultation with the U.S. Fish and Wildlife Service to determine appropriate compensatory ratios, which may include:

- Purchasing conservation bank credits from a U.S. Fish and Wildlife Service- and California Department of Fish and Wildlife-approved bank—when made available—for the giant garter snake.
- Restoring habitat on protected land, which may include Natural Community Conservation Plans or Habitat Conservation Plans.
- Establishing new habitat by permittee-responsible mitigation through the purchase of mitigation lands or changes in current land practices to increase the existing nearby natural landscape.
- Giant garter snake temporary impacts would be recontoured and revegetated with an appropriate weed-free native plant seed mixture following the completion of construction. Credits would also be purchased for these temporary impacts.

*Vernal Pool Fairy Shrimp*

Aquatic resources next to the edge of a right-of-way that are found to be suitable for the vernal pool fairy shrimp would be excluded by environmentally sensitive area fencing before construction starts. Access, egress, and ground-disturbing activities would be sited to avoid vernal pools, where feasible. If construction activities impact the integrity of pool hydrology within the micro-watershed, then compensation may be required for that pool, which would be determined during consultation with the U.S. Fish and Wildlife Service. Unavoidable effects would be compensated through purchasing credits at a mitigation bank approved by the applicable regulatory agency or agencies.

Unavoidable effects to fairy shrimp would require consultation with the U.S. Fish and Wildlife Service to determine appropriate compensatory ratios. Compensatory mitigation ratios may be higher in areas designated as critical habitat than in non-critical habitat areas. Compensatory mitigation for fairy shrimp includes the following:

- Purchasing conservation bank credits from a U.S. Fish and Wildlife Service-approved bank—when made available—for vernal pool fairy shrimp.
- Restoring habitat on protected land, which may include Natural Community Conservation Plans or Habitat Conservation Plans.
- Establishing new habitat by permittee-responsible mitigation through the purchase of mitigation lands or changes in current land practices to increase the existing nearby natural landscape.

*Colusa Grass*

The following avoidance and minimization measures have been included in the project to protect Colusa grass:

- A qualified biologist would conduct a worker environmental awareness training for all construction staff who enter the project site, and before they perform any project-related work or activities. The training would cover the federally listed species that have the potential to occur in the project area.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, re-initiation with the U.S. Fish and Wildlife Service may be required. Transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Succulent (Fleshy) Owl's-Clover*

This species has not been documented in the action area, so no impacts to individual plants are expected to occur from the proposed action. However, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following avoidance and minimization measures have been included in the project to protect the succulent (fleshy) owl's-clover:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. Methodologies outlined in the California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Greene's Tuctoria*

Surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and

vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site.

The following measures would be implemented to avoid and minimize effects to Greene's tuctoria:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Hairy Orcutt Grass*

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this

species and vernal pool and wetland habitat. These areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following measures would be implemented to avoid and minimize effects to hairy orcutt grass:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*San Joaquin Valley Orcutt Grass*

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. These areas are used for cattle

grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following measures would be implemented to avoid and minimize effects to San Joaquin Valley orcutt grass:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.
- If any federally listed species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Swainson's Hawk*

The following measures would be implemented to avoid and minimize effects to the Swainson's hawk:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- If construction occurs during the nesting season, which is from February 1 to September 30, pre-construction nesting surveys would be completed throughout the new Caltrans right-of-way. Surveys would follow general guidelines identified in the "*Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*."
- If Swainson's hawks are seen nesting within a half-mile of the project, a 600-foot-radius no-work buffer would be designated. Nest trees would be identified, and environmentally sensitive area fencing would be installed around nest trees and wherever the no-work buffer overlaps with construction activities.
- Nest trees would be monitored until a qualified biologist has determined that the birds have fledged.
- If work needs to occur within the 600-foot buffer, some activities may be allowed if a biological monitor is present and determines that those construction activities are not disrupting nesting Swainson's hawks.

*Boggs Lake Hedge-Hyssop*

Focused botanical surveys were conducted during a drought year, so suitable habitat for this species may be present in non-native grasslands. The location where non-native grasslands occur contains areas associated with this species and vernal pool and wetland habitat. However, these areas are used for cattle grazing, which may cause too much disturbance for this species to maintain a viable population. Additionally, the presence of non-native species of grasses and forbs may further reduce the potential for this species to occur on-site. The following measures would be implemented to avoid and minimize effects to the Boggs lake hedge-hyssop:

- A qualified biologist would conduct a worker environmental awareness training for all workers who enter the project site, and before they perform any project-related work or activities. The training would cover the federally listed species that have the potential to occur in the project area and areas designated as critical habitat. The training would also cover the

laws that protect federally listed species, and measures implemented for the project to protect them and their habitat from impacts.

- An Emergency Spill Prevention Plan would be prepared and would include measures to minimize the risk of fluids or other materials—oils, transmission and hydraulic fluids, cement, and fuel—from entering waterways or sensitive upland habitats. The Emergency Spill Prevention Plan would be kept on-site and easily accessible throughout construction.
- The contractor would follow Best Management Practices specifically developed for the project and its location.
- The stockpiling of materials, equipment (including portable equipment), vehicles, and supplies (including chemicals) would be restricted to designated construction staging areas.
- Once construction is complete, all areas disturbed by the project would be re-seeded with a native species seed mix.
- Pre-construction botanical surveys would be completed throughout the new Caltrans right-of-way at location 13. The California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (2009) would be followed.

If any federally listed, state-listed, or rare species of plants are seen within the project footprint during pre-construction botanical surveys, efforts to avoid them would be made by installing environmentally sensitive area fencing. For any individuals that cannot be avoided, transplanting efforts (to a suitable location outside of the project impact area), seed collection, or the collection, stockpiling, and re-application of duff would be coordinated with the U.S. Fish and Wildlife Service.

*Invasive Species*

To prevent the introduction and spread of other invasive species discussed in Chapter 2 into the project area, Caltrans has issued policy guidelines that provide a framework for addressing roadside vegetation management and minimization measures for construction activities and maintenance programs as follows:

- Caltrans periodically maintains vegetation in its rights-of-way by mowing, disking, and spraying herbicides.
- Staging and storing equipment should be done in weed-free areas. Infestations of noxious and/or highly invasive weeds were mapped during the project planning phase to determine if hand, mechanical, or chemical eradication treatments are feasible, or if it is feasible to exclude those areas from the contractor’s use.

- A non-standard special provision would be included in the construction contract that requires construction equipment and vehicles to be cleaned before entering and exiting the project site.
- No mitigation is proposed.

# **Appendix C** Comment Letters and Responses

***Text of Comment from the State Clearinghouse and Planning Unit***

July 2, 2019

Jennifer Lugo
Caltrans 6 (Fresno)
855 M Street, Suite 200
Fresno, California 93721

Subject: Merced 140 Roadside Safety Improvements Project
SCH Number 2019059129

Dear Jennifer Lugo:

The State Clearinghouse submitted the above-named MND to selected state agencies for review. The review period closed on 7/1/2019, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act, please visit: https://ceqanet.opr.ca.gov/2019059129/2 for full details about your project.

Please call the State Clearinghouse at 916-445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

***Caltrans Response to Comment from the State Clearinghouse and Planning Unit***

Thank you for acknowledging our compliance with the California Environmental Quality Act requirements as stated in the State Clearinghouse guidelines. Caltrans has recorded the corresponding State Clearinghouse number for this project.

# List of Technical Studies Bound Separately

Air Quality Report

Noise Study Report

Water Quality Report

Biological Opinion

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

- Historic Resource Evaluation Report
- Historic Architectural Survey Report
- Archaeological Survey Report

Hazardous Waste Reports

- Initial Site Assessment
- Preliminary Site Investigation

Scenic Resource Evaluation/Visual Assessment

Paleontological Identification Report

Farmland Conversion Impact Rating Forms

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to the following email address: d6.public.info@dot.ca.gov.

Please indicate the project name and project identifying code (under the project name on the cover of this document) and specify the technical report or document you would like a copy of. Provide your name and email address or U.S. postal service mailing address (street address, city, state and zip code).