STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SCH No. 2026060207
04-SOL-12; EA 04-0AA53

SOLANO STATE ROUTE 12 PAVEMENT PRESERVATION

SOLANO COUNTY, CALIFORNIA
CALTRANS DISTRICT 04
STATE ROUTE 12, POST MILE 14.10/20.68
EA: 04-0AA53
EFIS: 0419000507

Initial Study with Mitigated Negative Declaration



Prepared by the
California Department of Transportation

AUGUST 2026

General Information about this Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration (IS/MND) for the Solano County State Route 12 Pavement Preservation Project (Project). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the Project is being proposed, what alternatives we have 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 (all measures are listed in Appendix A).

The IS/MND was circulated for 30 days between June 5 and July 5, 2026. Two comment submittals were received during the public review periods, and responses to these comments are included in Appendix G. Revisions made since the draft document circulation are indicated throughout the documents with a vertical line in the margin. An electronic copy of this document is available for review at the following website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4environmental-docs.

Alternative Formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To s a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Xenia Rangaswami, Environmental Planning, 111 Grand Avenue P.O. Box 23660, MS-8B, Oakland, CA 94623; (855) 367-3269 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

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Initial Study with Mitigated Negative Declaration

04-SOL-12	14.1/20.68	04-0AA53
Dist. – Co. – Rte.	PM	E.A.

Project title:	Solano State Route 12 Pavement Preservation Project
SCH number:	2026060207
Lead agency name and address:	California Department of Transportation (Caltrans) 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Xenia Rangaswami, Environmental Scientist (510) 847-7905
Project location:	Solano County State Route 12
General plan description:	Highway
Zoning:	Agricultural Lands and Open Spaces
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements)	• 1602 Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife • 404 Nationwide Permit from the U.S. Army Corps of Engineers • Section 401 Clean Water Act Permit from the State Water Resources Control Board • Biological Opinion from the U.S. Fish and Wildlife Service • 2081 Incidental Take Permit (ITP) from the California Department of Fish and Wildlife

The document, maps, Project information, and supporting technical studies are available for review and download at the Caltrans environmental document website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs.

For

Brian Jassner

Maxwell Lammert
Office Chief
Environmental Analysis
Caltrans District 4

08/21/2026
Date

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The proposed Project is located on SR 12, between postmile (PM) 14.10 and 20.68 in Solano County, California, located approximately 0.6 miles west of Denverton Overhead to Currie Road. Figure 1 shows the proposed Project's location. The proposed Project includes pavement dig-outs, cold planing, asphalt concrete (AC) overlay, AC dikes, centerline and shoulder (edgeline) rumble strips, shoulder widening, and drainage improvements. The proposed Project will also upgrade metal beam guardrail, upgrade traffic signing panels, and delineate pavement.

Determination

Caltrans has prepared an Initial Study for this proposed Project, and has determined from this study that the proposed Project would not have a significant effect on the environment for the following reasons:

The proposed Project would have no effect on agriculture and forestry, cultural resources, energy, geology/soils, land use/planning, mineral resources, population/housing, public services, recreation, tribal cultural resources, utilities/service systems, and wildfire.

The proposed Project would have a less than significant effect on aesthetics, air quality, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, noise, and transportation.

With the following Mitigation Measures incorporated, the proposed Project would have a less than significant effect on biological resources:

MM-BIO-1: Compensation to Offset Project Permanent Impacts. To prevent significant impacts from the proposed Project, Caltrans will implement a compensation package based on the estimated impacts on protected natural resources, including wetlands, other waters, and suitable habitat in the range of the listed species. Compensation will be determined in coordination with the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW) during the design phase. At a minimum, the compensation will be a 1:1 ratio, with final ratios determined during the Consultation and permitting processes. Caltrans will follow a compensatory mitigation approach of prioritizing (1)

bank credits, (2) in-lieu fee program credits, then (3) permittee-responsible mitigation. Bank credits are currently available, and are expected to be available, to use for impacts to wetlands, California tiger salamander (CTS), and vernal pool branchiopods. Caltrans expects to purchase bank credits as compensatory mitigation for impacts to these resources. In the event that bank credits are not available at the time for wetland impacts, in-lieu fee program credits are expected to be available. In the event that all credit options are unavailable for any of these biological resources, on-site or off-site permittee-responsible mitigation would be pursued, such as habitat restoration or preservation.

MM-BIO-2: Wetland Mitigation Monitoring. After construction, Caltrans would restore temporarily disturbed wetland habitats and monitor onsite revegetation at these locations as well as any locations where additional wetland enhancement or restoration is implemented as compensatory mitigation. Reports to environmental regulatory agencies on the status of monitoring following Project completion would be submitted as determined in Project permits and authorizations. The Caltrans mitigation requirement would be considered satisfied once the target acreage of wetland habitat to be restored is successful, as determined and approved by the regulatory agencies requiring compensatory mitigation.

Christopher Caputo

08/21/2026

Christopher Caputo
Deputy District Director
Environmental Science and Engineering
Caltrans District 4

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is the California Environmental Quality Act (CEQA) lead agency and sponsor for the proposed Project and has prepared this IS/MND.

The proposed Project is located on SR 12, between postmile (PM) 14.10 and 20.68 in Solano County, California, located approximately 0.6 miles west of Denverton Overhead to Currie Road. Figure 1 shows the proposed Project's location. The proposed Project includes pavement dig-outs, cold planing, asphalt concrete (AC) overlay, AC dikes, centerline and shoulder (edgeline) rumble strips, shoulder widening, and drainage improvements. The proposed Project will also upgrade metal beam guardrail, upgrade traffic signing panels, and delineate pavement.

The proposed Project is funded under the State Highway Operation and Protection Program (SHOPP) program code 201.121. The 2024 SHOPP is the State Highway System's "fix-it-first" program that funds the repair and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System (SHS). It has also been determined that the proposed Project is eligible for Federal-aid funding. The proposed funding fiscal year is 2028/2029. The total programmed cost of the proposed Project for support and capital, including construction cost, is approximately $37.388 million.

Figure 1-1: Vicinity Map

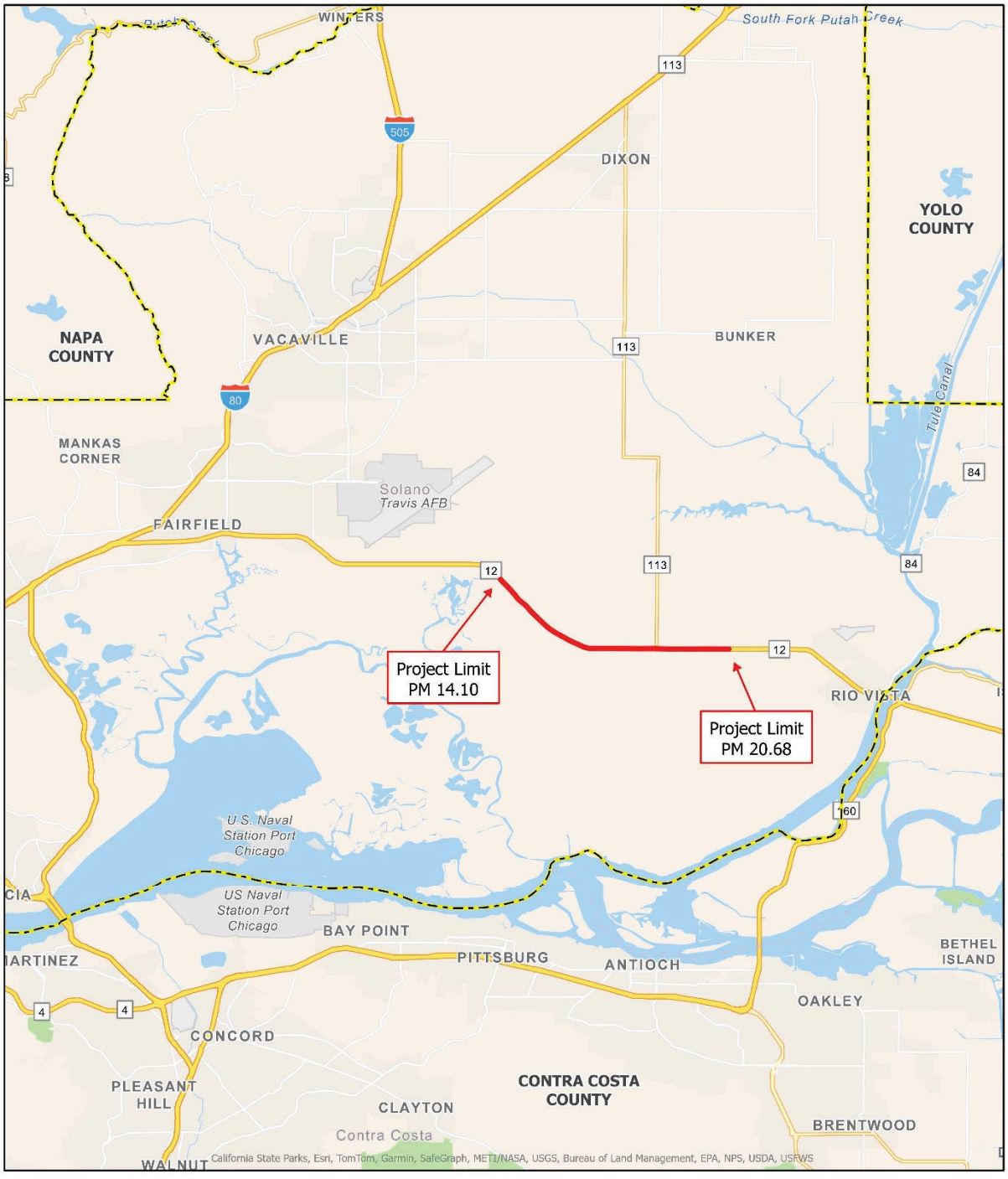


Figure 1-1: Vicinity Map.

Project footprint on State Route 12 from postmile 14.10-20.68 and surrounding areas.

1.2 Purpose and Need

The purpose of the proposed Project is to improve overall ride quality, reduce repetitive maintenance activities, and preserve and extend the service life of the existing pavement. The Project also proposes updating existing shoulders, drainage facilities, and guardrails to current standards and improving bike lanes.

The proposed Project is needed because the pavement in this section of SR 12 is exhibiting signs of distress, including cracks and deterioration, which has led to pavement damage, poor ride quality and increased maintenance and rehabilitation needs to restore it to near-normal condition. Other ancillary roadway features along the corridor that do not meet current standards, such as drainage facilities, guardrails, and shoulders, need to be upgraded to improve safety and operational performance. There is also a need to widen shoulders within some portions of the proposed Project to improve bike safety in compliance with Caltrans complete streets policies.

Chapter 2 Project Description

2.1 Introduction

The proposed Project is located on SR 12, between PM 14.10 and 20.68 in Solano County, California, located approximately 0.6 miles west of Denverton Overhead to Currie Road. This Capital Preventative Maintenance (CAPM) Project proposes to improve the roadway by grinding and resurfacing the highway mainline and shoulders. The planned work includes dig-outs, cold planing, asphalt concrete (AC) overlay, AC dikes, centerline and shoulder (edgeline) rumble strips, shoulder widening to improve bike safety, and drainage improvements. In addition, the scope includes upgrading metal beam guardrails (MBGR) to the Midwest guardrail system (MGS), installing concrete pads for vegetation control at guardrail locations, replacing traffic sign panels, refreshing pavement markings, and installing/upgrading biofiltration strips.

There are two alternatives that Caltrans has evaluated for the proposed Project, the Build Alternative and the No-Build Alternative. The Build Alternative would include the proposed improvements and repairs to the roadway, shoulder widening, and drainage systems. Under the No-Build alternative, no upgrades would be made to SR 12. The current conditions of the proposed Project area serve as the baseline condition upon which impacts of the Build Alternative are evaluated.

2.2 Build Alternative – Proposed Project

2.2.1 Pavement Overlay

The proposed Project will perform dig-outs at failed structural areas, cold plane existing pavement, and overlay new pavement. Dig-outs entail the complete removal of existing asphalt and the base layer supporting it in severely distressed areas and then rebuilding that base layer prior to installing new pavement. Cold planing is a process where the existing pavement is ground down, leaving the base layer intact, before new pavement is installed. Pavement overlays are performed by placing new layers of asphalt on top of the base layer. There will be grinding of existing roadway pavement and replacement with hot-mixed asphalt concrete (HMA) or rubberized hot-mix asphalt concrete (RHMA) on different sections of the highway throughout the entirety of the Project limits.

2.2.1.1 DIGOUTS

Structurally deficient/failed pavement areas, such as potholes in the roadway, will be removed by excavating the pavement materials to a depth of 6 inches, which involves removing the AC layer and part of the base layer in a square shape surrounding the

pothole, then filling it back in with appropriate base material, compacting it, and then installing new pavement.

2.2.1.2 Pavement Rehabilitation Strategy

Cold planing will be performed to a depth of 0.25 foot of the existing AC pavement by applying a rotating drum and cutters to the asphalt surface, cutting into the pavement, and removing it. Then, an overlay of 0.10-foot-thick HMA Type A (HMA-A) will be placed on top of the cold-planed asphalt pavement surface in both the eastbound (EB) and westbound (WB) directions from edge of pavement to edge of pavement. A geosynthetic paving interlayer (GPI) of stress absorbing membrane interlayer-fabric (SAMI-F) will be placed on top of the 0.10-foot overlay. Finally, a leveling course of 0.15-foot RHMA Type G (RHMA-G) will be placed on top of the GPI.

2.2.2 Shoulder Widening

Shoulder widening work will occur between PM 17.0 and 17.4. In this portion of the Project, the existing shoulder width along the highway varies from 0 ft to 8 ft. The shoulder will be widened to meet the current standard of 8 feet.

Between PM 17.0 and 17.4, the existing shoulder areas will be excavated up to the desired depth of base and structural section. The soil adjacent to the existing shoulders will need to be leveled to accommodate the shoulder widening. This may involve excavating or importing soil to make a level surface. The existing shoulder will be widened up to a width of 8 feet. Specified aggregate base materials will be placed and compacted. A 0.15-foot-thick layer of HMA will then be placed to match the existing pavement structural materials depth and compacted. A tack coat (sticky, thin sprayed layer of asphalt emulsion) will be added to the area for adhesion in between every compacted layer before placing the next layer of asphalt. Each layer will be compacted with the appropriate tonnage of compacter after application.

2.2.3 Drainage Work

Seven culverts will be upgraded using the cut-and-cover method at the following postmile locations: 14.34, 15.60, 16.58, 17.00, 17.15, 17.30, and 18.47 (Table 2-1). The culvert located at PM 15.60 is listed in the Caltrans culvert inventory as being at PM 15.47. Since PM 15.60 is the more accurate location, it will be referred to as such throughout this document. The cut-and-cover method involves digging a trench along the length of the existing culvert using small equipment such as a backhoe, removing the existing culvert, placing the new culvert inside of the trench, and then backfilling the trench to restore the surface. Flared end sections (FES) and rock slope protection (RSP) will be added to the end of the corrugated steel pipe (CSP) of the culverts at PM

14.34 and 15.60. In addition to replacing the upstream and downstream ends (approximately 5-foot-long sections) of the culvert using the cut-and-cover method, the central portion of the culvert at PM 14.34 will be rehabilitated using alternative pipe lining (APL). A type-G2 drainage inlet (DI) with a stormwater guard drain (SGD) will be added to the existing inlet at PM 18.47 and a CSP culvert will be added along the shoulder to connect the new and existing drainage inlets. Additionally, the cross-culverts at PM 17.00, 17.15, and 17.30 will be extended to accommodate shoulder widening.

Table 2-1: Culvert Work

No.	PM	Direction	Proposed Work
1	14.34	WB/EB	Place 18" CSP FES at existing 18" CSP inlet and outlet with RSP; remove and replace 5' portion of cross culvert on upstream and downstream ends; rehabilitate existing culvert with APL
2	15.60	WB/EB	Line and replace 24" CSP FES at the existing 24" CSP inlet and outlet with RSP
3	16.58	WB/EB	Place 18" CSP FES at existing 18" CSP inlet and outlet with RSP
4	17.00	WB/EB	Extend 24' culvert approximately 10' in each direction
5	17.15	EB	Place 24" CSP FES at existing 24" CSP inlet and outlet with RSP; extend 24" culvert approximately 10'
6	17.30	EB	Extend 30" culvert approximately 10'
7	18.47	WB	Place G2 DI with SGD; place 18" x 160' CSP along shoulder to drain new DI to existing DI on the west

All HMA curbs along the roadway and HMA overside drains (OSD) within the proposed Project limits will be removed and replaced to improve drainage.

2.2.4 Guardrail Upgrades

Guardrails improve safety by reducing the severity of run-off-the-road crashes, preventing vehicles from crossing into oncoming traffic, and slowing vehicles that veer off course. All existing metal beam guardrail (MBGR) will be upgraded to the new standard guardrail system, which is called the mid-west guardrail system (MGS) and uses steel posts resulting in a higher safety rating. MGS features a higher rail height, places rail splices between posts instead of directly at a post and uses larger blockouts (spacers that create a gap between the rail and the post) compared to the older MBGR system. The new guardrail will be longer than the existing guardrail by approximately 1,648 linear feet (Table 2-2). The guardrail will be extended by a total of 648 linear feet from its current length at nine locations: PM 14.10 EB, 14.10 WB, 15.43 WB, 16.33 WB, 19.00 EB, 19.05 EB, 19.05 WB, 19.08 EB, and 19.08 WB. Additionally, 1,000 linear feet

of new MGS will be placed on the outside shoulder next to five WB culvert ends at PM 18.41, 18.60, 18.70, 18.80, and 18.93. At each culvert, up to 200 feet of new MGS will be installed (Table 2-2). A concrete transition barrier rail will be placed to connect MGS to the existing bridge rails at three locations: concrete transition Type 80A (blocks of tapered concrete) at PM 14.1, barrier transition Type 25 (rigid, vertical concrete blocks) at Denverton Overhead (Braids Bridge) at PM 14.7, and modified barrier transition Type 25 at Round Hill Creek Bridge at PM 19.07. The existing bridge rails will remain.

Table 2-2: New Guardrail Locations

No.	PM	Direction	Description	Length (linear feet)
1	14.10	EB	Extend from existing location	87
2	14.10	WB	Extend from existing location	115
3	15.43	WB	Extend from existing location	23
4	16.33	WB	Extend from existing location	60
5	19.00	EB	Extend from existing location	63
6	19.05	EB	Extend from existing location	75
7	19.05	WB	Extend from existing location	75
8	19.08	EB	Extend from existing location	75
9	19.08	WB	Extend from existing location	75
10	18.41	WB	Install new MGS at culvert	200
11	18.60	WB	Install new MGS at culvert	200
12	18.70	WB	Install new MGS at culvert	200
13	18.80	WB	Install new MGS at culvert	200
14	18.93	WB	Install new MGS at culvert	200

2.2.5 Rumble Strip Installation

Rumble strips improve safety by alerting drivers who are drifting from the roadway and help reduce run-off-the-road crashes. As part of the proposed Project, longitudinal rolled-in rumble strips (grooves pressed into the pavement) will be reinstalled along the centerline and on both the left and right shoulders in each direction. Once the pavement overlay is complete, a milling machine will cut the rumble strips into the road surface according to standard plans. A vacuum vehicle will follow closely behind to remove debris generated during the process. Retroreflective raised pavement markers will then be installed along the centerline of the roadway using either pressure-sensitive adhesive or thermoplastic material. Retroreflective materials are designed to reflect headlights back to the driver's eyes, making the object easier to see at night or in low-

light conditions. Finally, new roadway striping will be applied over the rumble strips to complete the installation.

2.2.6 Pavement Delineation and Traffic Sign Panel Replacement

Retroreflective sheeting will be used for pavement delineation and traffic sign panels in accordance with Federal Highway Administration (FHWA) requirements. This will result in improved visibility, reduced maintenance efforts, and reduced costs.

2.2.7 Biofiltration Strips

Four stormwater treatment best management practices (TBMPs) will be implemented in the form of biofiltration strips. A biofiltration strip (BIOSTP) is a sloped vegetated land area located adjacent to paved areas, over which stormwater runoff flows over it as a thin sheet (sheet flow). Approximately, 52,713 square feet (sqft) (1.21 acres) of stormwater will be treated, which satisfies the required 1.05 acres of treatment for the proposed Project (Table 2-3).

Table 2-3: Proposed TBMP Locations

No.	Direction	Begin PM	End PM	Approximate Treated Area from TBMP (sqft)	Description
1	W	14.38	R14.446	26,776	Between two double-DIs, 20' from existing pipe
2	W	17.77	17.78	2,069	New BIOSTP between dikes and two existing BIPSTPs
3	W	18.05	18.10	13,213	New BIOSTP from culvert inlet to hill
4	E	18.05	18.10	10,655	New BIOSTP from culvert outlet to hill

2.3 Construction Staging, Equipment, and Schedule

2.3.1 Construction Staging

Construction work will take place during non-peak hours, using standard lane closures to minimize traffic impacts. Additionally, a paved area off the highway at PM 17.16 can be used to store equipment and materials.

2.3.2 Equipment

Major construction equipment that may be used includes a cold planer, backhoe, haul truck, vacuum truck, paint truck, water truck, guardrail installation truck, milling machine, asphalt pavers, pavement roller, and soil compactor.

2.3.3 Schedule

Construction is expected to begin Spring 2029 and end Winter 2030. Work will take place over two construction seasons, with one rainy season in between. The Build Alternative is expected to take approximately 120 working days to construct.

2.3.3.1 Night Time Work

To minimize traffic disruption, roadway pavement grinding and resurfacing will take place at night.

2.3.3.2 Traffic Management

To maintain traffic flow during construction, there would be one-way traffic control. These closures allow vehicles to continue moving through the area while work is underway. Repaving work is expected to occur at night to minimize disruption. The full roadway will reopen to traffic each day once construction activities are completed. . Access to businesses will be maintained at all times during weekday normal business times.

One-way traffic control is expected to occur during the following hours (subject to change based on traffic conditions):

- Monday-Thursday: 7:00 PM to 6:00 AM
- Friday: 7:00 PM to 6:00 AM
- Saturday: 6:00 PM to 9:00 AM
- Sunday: 7:00 PM to 11:00 AM

2.4 Right-of-Way Requirements

All proposed work is within Caltrans right of way (ROW).

2.5 Utility Relocations

No utility relocations are anticipated for the proposed Project. However, there are moderate risks that unanticipated utility lines will need to be relocated during construction. Potholing will be conducted to determine the locations of utility lines. Every effort will be made to avoid utility relocation.

2.6 Impacts on Vegetation

Vegetation, including grasses and shrubs, will be trimmed or removed in areas with MBGR upgrade to MGS, shoulder widening, culvert extension, installation of culvert flared end sections, and rock slope protection. There will be no tree removal.

2.7 Project Features

The proposed Project contains a number of standardized Project Features (PF) that are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact. Project Features are separate from Avoidance and Minimization Measures (AMM), which directly relate to impacts resulting from the proposed Project. AMMs are discussed separately in each environmental section of Chapter 3 and listed in Appendix B. Refer to Table 2-4 for a list of PFs for the proposed Project.

Table 2-4: Project Features List

Resource Area	Project Feature Reference	Project Feature
Aesthetic (AES)	PF-AES-1	Vegetation Protection. Trees and vegetation outside of the clearing and grubbing limits would be protected from the contractor's operations, equipment, and materials storage. When the pruning of trees is required to accommodate construction operations, pruning must be done under the supervision of an ISA certified arborist with standards outlined by ANSI A300 Part 1 by the Tree Care Industry Association. If removal of highway planting is necessary, replacement planting shall be provided within the proposed Project limits where safety and maintenance requirements can be met.
Aesthetic	PF-AES-2	Erosion Control. Permanent erosion control will be provided to all disturbed soil areas, including staging areas, not receiving pavement or shoulder backing. Erosion control measures may include soil decompaction, slope rounding, slope roughening, compost amendment, incorporating materials into soil that increase vegetation suitability rolled erosion control products, fiber rolls, hydroseed, and hydromulch. In addition, existing cut slopes may also require stabilization. At these locations, erosion control should consist of 1-step hydroseeding with hydraulic biotic growth medium fiber, organic fertilizer, and mycorrhizae inoculant agronomic additives.
Aesthetic	PF-AES-3	Construction Staging. Construction staging areas shall be located on paved areas.
Aesthetic	PF-AES-4	Construction Waste. During construction operations, unsightly material and equipment in staging areas would be placed where they are less visible and/or covered where possible.

Resource Area	Project Feature Reference	Project Feature
Aesthetic	PF-AES-5	Aesthetic Treatments. Incorporate aesthetic treatments to visible Project features where appropriate such as color and/or texture to help reduce glare, limit visual contrast, and support visual unity and intactness along the corridor. Design rock slope protection with material of an appropriate size, scale, and color such that it reduces visual contrast.
Air Quality (AQ)	PF-AQ-1	Vehicle and Equipment Maintenance. Regular vehicle and equipment maintenance would be enforced.
Air Quality	PF-AQ-2	Idling. Vehicles and equipment would have limited idling time.
Air Quality	PF-AQ-3	Recycling. If practicable, recycle non-hazardous waste and excess material. If recycling is not practicable, dispose of material off-site in approved disposal facilities.
Air Quality	PF-AQ-4	Solar-Powered Boards. Use solar-powered signal boards, if feasible.
Biology (BIO)	PF-BIO-1	Wildlife Exclusion Fencing (WEF). Before starting construction, at the discretion of the Caltrans biologist, WEF will be installed along the drainage system work areas where wildlife could enter the proposed Project alignment. WEF will be removed following completion of construction activities. At the discretion of the Caltrans biologist, WEF may be removed at times when construction is no longer active in the area.
Biology	PF-BIO-2	Mark Environmentally Sensitive Areas. Before construction begins, Environmentally Sensitive Areas (ESAs) will be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking will remain in place throughout construction or until work is completed at a particular location. It may be removed during the wet season (and subsequently reinstalled) if needed to prevent materials from being washed away. The final Project plans will depict all locations where ESA markings will be installed and how they will be installed. The bid solicitation package special provisions will clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings will be maintained in good repair throughout the proposed Project as needed.
Biology	PF-BIO-3	Nesting Bird Surveys. If proposed Project activities occur from February 1 to September 30, then a pre-construction survey will be conducted for nesting birds no more than 10 calendar days before construction. If active nests are found, then an appropriate buffer will be established, and the nest will be monitored for compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503.
Biology	PF-BIO-4	Restoration of Disturbed Areas. Temporarily disturbed areas will be restored to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses to stabilize and prevent erosion. Where disturbance includes the removal of woody shrubs, native species will be replanted, based on the local species composition.

Resource Area	Project Feature Reference	Project Feature
Biology	PF-BIO-5	Prevention of Inadvertent Entrapment and Entanglement. To prevent wildlife from becoming entangled or trapped in erosion control materials, plastic monofilament netting (i.e., erosion control matting) or similar material will not be used. Acceptable substitutes include coconut coir matting or tackifying hydroseeding compounds.
Biology	PF-BIO-6	Site Restrictions. The following site restrictions would be implemented: • Enforcing a speed limit of 15 miles per hour in the proposed Project footprint in unpaved and paved areas to reduce dust and excessive soil disturbance. • Locating construction access, staging, storage, and parking areas within the proposed Project ROW and outside any designated ESA. Access routes, staging and storage areas, and contractor parking would be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork would be clearly marked before initiating construction or grading. • Certifying, to the maximum extent practicable, borrow material is non toxic and weed free. • Picking up debris and waste daily. Disposing of all food-related trash items such as wrappers, cans, bottles, and food scraps in closed containers and to be removed at least once a day from the work area. • Prohibiting pets from entering the proposed Project footprint during construction. • Prohibiting firearms within the proposed Project footprint, except for those carried by authorized security personnel or local, state, or federal law enforcement officials. • Maintaining equipment to prevent the leakage of vehicle fluids such as gasoline, oils, or solvents and developing a Spill Response Plan. Hazardous materials such as fuels, oils, solvents, and similar would be stored in sealable containers in a designated location that is at least 50 feet from aquatic habitats.

Resource Area	Project Feature Reference	Project Feature
Biology	PF-BIO-7	Invasive Species Prevention. To avoid the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health effects. In the event that noxious weeds are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these noxious weeds and dispose of it in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance would be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the proposed Project footprint would be covered to the extent practicable with heavy black plastic solarization material until the end of the Project. If work occurs in sensitive habitat, vehicles and equipment would be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds.
Cultural (CULT)	PF-CULT-1	Unidentified Resources. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find in consultation with the Tribe to determine whether or not additional study is warranted. Additional archaeological surveys will be needed if Project limits are extended beyond the present survey limits. Contact the Lead Caltrans Archaeologist in the Office of Cultural Resource Studies. If any Tribal Cultural Resources (TCR) as defined by the Tribe [Yocha Dehe Wintun Nation] and CEQA are found during construction, a Professionally Qualified Staff archaeologist shall assess the find. The Office of Cultural Resource Studies will notify local consulting Tribes if the resource is determined to be a TCR and consult with the contractor and the Tribe to determine whether the resources can be avoided by the proposed Project. If the TCR cannot be avoided, then further consultation efforts with the Tribes would be necessary to determine its treatment.
Cultural	PF-CULT-2	Human Remains Discovery. If Caltrans Professionally Qualified Staff determines that cultural materials contain human remains, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains. Caltrans' Cultural Resources Studies Office will contact the County Coroner. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent. Caltrans, District 4, Cultural Resources Studies Office will work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Resource Area	Project Feature Reference	Project Feature
Hazardous Waste (HAZ)	PF-HAZ-1	Hazardous Waste Management. The current Caltrans Standard Specifications Section 13-4, Job Site Management, would be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. All aspects of the proposed Project associated with transport, storage, use, and disposal of hazardous materials would be done in accordance with the California Health and Safety Code and the appropriate local, state, and federal hazardous waste regulations. Handling and management of hazardous materials would comply with the current Caltrans Standard Specifications Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.
Wildfire (WF)	PF-WF-1	Fire Prevention. Caltrans would implement the following fire prevention practices into the proposed Project construction specifications: Internal combustion engines, stationary and mobile, would be equipped with spark arrestors. Spark arrestors would be in good working order. Contractor would keep all construction sites and staging areas free of grass, brush, and other flammable materials. Personnel would be trained in the practices of the fire safety plan relevant to their duties. Construction and maintenance personnel would be trained and equipped to extinguish small fires. Work crews would have fire-extinguishing equipment on hand, as well as emergency numbers and cell phone or other means of contacting the fire department. Smoking would be prohibited while operating equipment and would be limited to paved or graveled areas or areas cleared of all vegetation. Smoking would be prohibited within 30 feet of any combustible material storage area (including fuels, gases, and solvents). Smoking would be prohibited in any location during a Red Flag Warning issued by the National Weather Service for the proposed Project area.
Water Quality (WQ)	PF-WQ-1	Tracking Control. This practice involves implementing a temporary entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles. This practice helps in preventing and reducing sedimentation from entering a storm drain or watercourse.
Water Quality	PF-WQ-2	Waste Management and Materials Pollution Control. Properly handle and store materials in a manner that avoids the discharge of these materials to the storm drain system or to nearby watercourses. Properly dispose of any vegetation/landscape waste material to avoid the discharge of these materials into storm drain systems or nearby watercourses. Label products, implement proper cleaning techniques, and recycle materials. All hazardous materials and waste must be labeled (e.g., Diesel, gasoline, fertilizers, solvents). Store all hazardous materials and other waste in approved secondary containers protected from wind and water.

Resource Area	Project Feature Reference	Project Feature
Water Quality	PF-WQ-3	Temporary Soil Stabilization Control and Wind Erosion Control. This practice involves the placement of geosynthetics, turf reinforcement mats, plastic covers, or rolled erosion control products (RECPs), including erosion control blankets, to stabilize disturbed soil areas and protect soils from erosion by wind or water.
Water Quality	PF-WQ-4	Temporary Sediment Control. Store, transport, and transfer all disturbed soil, sand, and material in conformity with the technical Caltrans Standard Specifications (2025). In addition, avoid storing excavated material where it can easily erode onto roadways, or into drainage systems and streams. Avoid the transport of debris and silt off the construction site by implementing temporary sediment controls. These may include installing fiber rolls and silt fence. Soil stockpiles must be stabilized or securely covered at the end of each day. When needed, street sweeping shall be conducted to remove sediment from roadways and to prevent sediment from entering storm drains or receiving waters.
Water Quality	PF-WQ-5	Job Site Management. This practice implements effective handling, storage, usage, and disposal practices to control material pollution and manage waste at the job site before they enter storm drain systems and receiving waters. This practice also recommends street sweeping to minimize or eliminate the discharge of waste material to receiving waters.

Resource Area	Project Feature Reference	Project Feature
Water Quality	PF-WQ-6	Best Management Practices (BMP). In accordance with State Water Resources Control Board requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be developed and erosion control BMPs implemented to minimize wind- or water-related erosion. The Caltrans Construction Site BMP Manual provides guidance for the inclusion of provisions in all construction contracts to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges. At a minimum, protective measures would include the following: • Prohibiting discharge of pollutants from vehicle and equipment cleaning into storm drains or watercourses. • Servicing vehicles and construction equipment including fueling, cleaning, and maintenance at least 50 feet from aquatic habitat unless separated by topographic or drainage barrier. If this is not possible, fueling would be conducted as stated in Caltrans' statewide Construction General Permit and Caltrans Construction Site BMP Manual. • Fueling must be performed on level-grade areas. On-site fueling would only be used when and where it is impractical to send vehicles and equipment off-site for fueling. When fueling must occur on-site, the contractor would designate an area to be used subject to the approval of the Resident Engineer representing Caltrans. Drip pans or absorbent pads would be used during on-site vehicle and equipment fueling. • Collecting and disposing of concrete wastes and water from curing operations in appropriate washouts, located at least 50 feet from watercourses. • Maintaining spill containment kits onsite at all times during construction operations and/or staging or fueling of equipment. • Using water trucks and dust palliatives to control dust in unvegetated areas and covering of temporary stockpiles when weather conditions require. • Protecting graded and designated staging areas from erosion using an appropriate combination of approved erosion control items or methods, in accordance with the SWPPP, as indicated in the State Water Resources Control Board permit, and as stated in the contract plans and special provisions. • Establishing permanent erosion control measures such as bio-filtration strips and swales to receive stormwater discharges from the highway or other impervious surfaces to the maximum extent practicable. • Installing coir rolls or straw wattles per guidance in the Caltrans BMP Guidance Handbook during construction to capture sediment. • Protecting graded and designated staging areas consistent with the State Water Resources Control Board Construction General Permit and the Caltrans BMP Guidance Handbook.

2.8 No-Build Alternative

The No-Build Alternative would not meet the purpose and need of the proposed Project. If no action is taken, continued degradation of the roadway surface and supporting base layers would result. Continued degradation of current drainage problems would also occur, affecting the structural integrity and ultimately creating more costly repairs to the roadway.

2.9 Permits and Approvals Needed

The following permits and approvals would need to be obtained for the proposed Project:

Table 2-5: List of Permits

Agency	Permit	Permit Status
California Department of Fish and Wildlife (CDFW)	1602 Lake and Streambed Alteration Agreement	The 1602 permit will be obtained during the design phase.
California Department of Fish and Wildlife	2081(b) Incidental Take Permit (ITP) for California Tiger Salamander (CTS)	The ITP will be obtained during the design phase.
State Water Resources Control Board (SWRCB)	401 Water Quality Certification and Wetlands	The 401 permit will be obtained during the design phase.
US Army Corps of Engineers (USACE)	404 Clean Water Act Nationwide Verification	The 404 permit will be obtained during the design phase.
US Fish and Wildlife Service (USFWS)	Biological Opinion (BO)	The BO will be obtained during the design phase. Technical assistance between Caltrans and USFWS staff was conducted on 9/24/2025 & 2/12/2026.

An Information for Planning and Consultation (IPaC) species list was generated on September 2, 2025, to identify federally listed species and critical habitats with potential to occur in the proposed Project area. Technical assistance meetings between USFWS and Caltrans staff were held on September 24, 2025 and February 12, 2026, to review the species list, Project scope, and preliminary effects determinations, as well as the need for formal Section 7 consultation. The USFWS indicated in these meetings that they concurred with the preliminary findings proposed by Caltrans regarding the species being discussed. More information about technical assistance is provided in Chapter 3, section *3.3.4 Biological Resources*.

Chapter 3 California Environmental Quality Act Evaluation

3.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed Project. In many cases, technical studies performed in connection with the proposed Project indicate that there are no impacts to a particular resource. A “No Impact” answer in the last column reflects this determination. The terms “significant” and “significance” used throughout the checklist are related to CEQA and are not National Environmental Policy Act (NEPA) determinations. The questions in this form 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 proposed Project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) 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. Project Features (PFs), Avoidance and Minimization Measures (AMMs), and Mitigation Measures (MMs) can be found in Appendix B.

Sections 3.3.1 through 3.3.21 present the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the proposed Project. The significance level determinations are defined as follows:

- No Impact: Indicates no physical environmental change from existing conditions.
- Less than Significant Impact: Indicates the potential for an environmental impact that is not significant with or without the implementation of AMMs.
- Less than Significant Impact with Mitigation Incorporated: Indicates the potential for a significant impact that would be mitigated with the implementation of MMs to a level of less than significance.
- Potentially Significant Impact: Indicates the potential for a significant and unavoidable environmental impact.

3.1.1 Aesthetics

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

Question	CEQA Determination
a) Have a substantial adverse effect on a scenic vista?	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
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
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant Impact

Caltrans completed a *Visual Impact Assessment Questionnaire* for the proposed Project (Caltrans 2025a). The findings of the questionnaire are summarized as they apply to CEQA in this section.

The proposed Project corridor is defined as the land that is visible from, adjacent to, and outside the highway right of way. It is determined by topography, vegetation, and viewing distance. Within the proposed Project corridor, SR 12 is characterized as a mostly two-lane rural highway with shoulders that vary in width. The visual environment of SR 12 within the proposed Project limits is of moderate scenic quality throughout. It is in a primarily agricultural setting, surrounded by rolling pastures and hills. On the eastbound side of the highway, large windmills dot the landscape. Adjacent to the highway, the vegetation consists largely of ruderal grasses and few trees. The views are homogeneous, creating low/medium visual memorability. The proposed Project is not within a section of highway designated as a Classified Landscaped Freeway or a State Scenic Highway.

a) No Impact

There are no scenic vistas within the proposed Project corridor; therefore, there would be no impact.

b) No Impact

The segment of SR 12 within the proposed Project corridor is not within a state scenic highway; therefore, there would be no impact.

c) Less than Significant Impact

Viewer groups within the proposed Project corridor include commuters and tourists driving on the highway. Viewers are expected to have low sensitivity to the proposed visual changes, as the proposed Project would introduce only minor alterations, including new pavement and guardrail replacement. It is anticipated that viewer groups would experience views of construction activities and staging areas. However, no significant visible changes are expected for either group once the proposed Project is completed. There would be no visible changes that will take away from the surrounding landscape. Therefore, there would be a less than significant impact.

d) Less than Significant Impact

The proposed Project would not produce substantial light or glare that would affect the daytime or nighttime views of the area. The glare from the new metal would result in no adverse visual impacts. Therefore, there would be a less than significant impact.

3.1.2 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 and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the proposed Project:

Question	CEQA Determination
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?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
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
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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

a, b, c, d, and e) No Impact

According to the California Department of Conservation (2025a) Farmland Mapping and Monitoring Program, the proposed Project area is adjacent to land zoned as farmland; however, no construction activities would take place on lands currently growing crops since all work will occur within Caltrans' existing ROW. No farmland would be temporarily impacted or converted to non-farmland use. Therefore, there would be no impact to agricultural resources as a result of the proposed Project. Additionally, the proposed Project area is not adjacent to or within land zoned as forest lands; therefore, no forest lands would be converted to non-forest use. There would be no impact to forest resources as a result of the proposed Project.

3.1.3 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. Would the proposed Project:

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?	Less Than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No Impact

Solano County is located in two air quality districts, the Bay Area Air Quality Management District and the Yolo-Solano Air Quality District, and in two air basins, the San Francisco Air Basin and the Sacramento Valley Air Basin. The proposed Project area is in nonattainment for ozone and particulate matter with aerodynamic diameter equal to or less than 10 micrometers (PM_{10}) and in nonattainment and unclassified for particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers ($PM_{2.5}$) under California Air Quality Standards (CARB 2023). Under National Ambient Air Quality Standards the proposed Project area is in nonattainment for ozone and in attainment for $PM_{2.5}$ and PM_{10}.

a), c), and d) No Impact

The proposed Project is exempt from conformity determination per 40 CRF 93.126 – Safety: Pavement resurfacing and/or rehabilitation. The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, expose sensitive receptors to substantial pollutant concentrations, or result in other emissions that adversely affect a substantial number of people. Since the proposed Project would not increase the capacity of the roadway, it would not result in operational degradation of air quality. While emissions would result from material processing by onsite construction equipment, workers commuting to and from the proposed Project site, and traffic delays due to construction, the increases are temporary and so slight as to be immeasurable and have already been included in the Statewide Implementation Plan There would be no impact to air quality as a result of the proposed Project.

b) Less than Significant Impact

The proposed Project would be required to comply with the Caltrans Standard Specification 14-9: Air Quality, which requires compliance with air pollution control rules, regulations, ordinances, and statutes that apply in the proposed Project area. Construction activities would be temporary. Additionally, the proposed Project would not increase capacity of the roadway and would therefore not result in operational degradation of air quality.

The following Project Features would be implemented:

- PF-AQ-1: Vehicle and Equipment Maintenance
- PF-AQ-2: Idling
- PF-AQ-3: Recycling
- PF-AQ-4: Solar-Powered Boards

Implementation of Caltrans Standard Specifications (such as complying with air-pollution-control rules, regulations, ordinances, and statues that apply to work performed under the scope of the proposed Project) and the use of BMPs would reduce emissions. There would be a less than significant impact.

3.1.4 Biological Resources

Would the proposed Project:

Question	CEQA Determination
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	Less Than Significant with Mitigation Incorporated
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 with Mitigation Incorporated
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
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
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

Caltrans prepared a *Natural Environment Study* (NES) for the proposed Project (Caltrans 2025b). The Biological Study Area (BSA) measures nearly 110 acres and includes all areas that could potentially be impacted by permanent and temporary construction activities and staging areas. The BSA encompasses Caltrans' right of way between PMs 14.10 and 20.68, including associated culvert systems and roadside drainage features, and includes a 50-foot buffer to account for temporary and indirect impacts to adjacent habitat. Within the BSA, the Project footprint totals approximately 46 acres, representing the portion of the BSA subject to permanent and temporary construction impacts. In addition, a broader 500-foot area was assessed for indirect noise impacts to special-status avian species.

A regional list of special-status wildlife and plant species was compiled by querying databases from the U.S. Fish and Wildlife Service (USFWS), California Native Plant Society (CNPS), California Natural Diversity Database (CNDDB), National Wetlands Inventory, and Natural Resources Conservation Service. Each special-status wildlife and plant species on these regional lists was evaluated to determine its potential to occur within the proposed Project's BSA.

Various studies were conducted in preparation for the NES, including:

- Wildlife habitat survey
- Bat habitat assessment
- Aquatic desktop review
- Rare plant survey

a) Less Than Significant with Mitigation Incorporated

SPECIAL-STATUS PLANT SPECIES

Special-status plants are those considered by scientists and regulatory agencies to be sufficiently rare to warrant protection.

A plant was considered to be rare if it met at least one of the following criteria:

1. Listed, proposed for listing, or a candidate for listing, as threatened or endangered under the Federal Endangered Species Act (FESA).
2. Listed, or a candidate for listing, as rare, threatened, or endangered under the California Endangered Species Act (CESA).
3. Listed in the Special Plants, Bryophytes, and Lichens List, as defined by the California Natural Diversity Database (CNDDB).
4. Ranked by the California Native Plant Society (CNPS) as 1 or 2 in the current online version of its Inventory of Rare and Endangered Plants of California (CNPS 2025).

Five state-listed, special-status plants could occur in the BSA due to the presence of suitable habitat: Contra Costa goldfields (*Lasthenia conjugens*), Keck's checkerbloom (*Sidalcea keckii*), soft bird's-beak (*Chloropyron molle* ssp. *molle*), Suisun thistle (*Cirsium hydrophilum* var. *hydrophilum*), and Mason's lilaeopsis (*Lilaeopsis masonii*). All of these species except Mason's lilaeopsis are also listed as federally endangered.

These species are typically associated with tidal/brackish marshes, intact vernal pool complexes, or undisturbed clay/serpentine grasslands. None of these habitats are present within the proposed Project footprint, which is largely disturbed roadway prism, compacted shoulder, and ruderal grassland subject to mowing and herbicide use. During plant surveys conducted in 2025 none of the five species were observed within the BSA. No vernal pools were present in the BSA, but there are swales (shallow, wide ditches) present that provide degraded habitat for Contra Costa goldfields due to the prevalence of tall annual grasses. Therefore, habitat suitability for Contra Costa

goldfields is low. Nevertheless, early- and mid-season surveys are scheduled for 2026 to complete protocol coverage.

Pre-construction surveys will be conducted for rare plants. Any special-status plant species found during surveys will be marked as Environmentally Sensitive Areas (ESA) and protected from construction impacts using high-visibility fencing.

The following Avoidance and Minimization Measures would be implemented to reduce impacts to special-status plants:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring

Technical assistance (via email) between Caltrans and USFWS staff communicated USFWS' expectation that Contra Costa goldfield (*Lasthenia conjugens*) surveys are preferable to assuming presence. Habitat assessment and avoidance and minimization strategies were also discussed and will be finalized during section 7 consultation during the Design phase of the proposed Project.

Due to the low potential for occurrence and the lack of species observed during the survey, the proposed Project would have less than significant impact on special-status plant species.

SPECIAL-STATUS WILDLIFE SPECIES

Seven special-status animal species could occur in the BSA due to the presence of appropriate habitat: branchiopods (vernal pool fairy shrimp, *Branchinecta lynchi*, and vernal pool tadpole shrimp, *Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), Swainson's hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), burrowing owl (*Athene cunicularia*), and pallid bat (*Antrozous pallidus*). Eleven special-status animal species with low potential to occur in the BSA were also evaluated: California linderiella (*Linderiella occidentalis*), California red-legged frog (*Rana draytonii*), northwestern pond turtle (*Actinemys marmorata*), other raptors (northern harrier, *Circus hudsonius*; ferruginous hawk, *Buteo regalis*; golden eagle, *Aquila chrysaetos*; and short-eared owl, *Asio flammeus*), American badger (*Taxidea taxus*), and other invertebrates (valley elderberry longhorn beetle, *Desmocerus californicus dimorphus*; monarch butterfly, *Danaus plexippus*; and western bumble bee, *Bombus occidentalis*).

Vernal Pool Branchiopods

Vernal pools are temporary, seasonal wetlands that fill with water during the winter and spring and become completely dry for most of the summer and fall. They form in depressions where rainwater is unable to drain into the subsoil. They typically occur in grasslands.

The vernal pool fairy shrimp (VPFS, *Branchinecta lynchi*) is a federally threatened species that occupies a variety of vernal pool habitats from small, clear, sandstone rock pools to large, turbid (cloudy with sediment), alkaline, grassland valley floor pools (California Department of Fish and Wildlife (CDFW) 2025). VPFS is endemic to grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic (shallow and fluctuating in size) rain-filled pools (CDFW 2025). Although the species has been collected from large vernal pools, it tends to occur in smaller pools measuring less than 0.02 hectare (0.05 acre). VPFS are most commonly found in grass or mud-bottomed swales, or basalt flow-depression pools (vernal pools formed above volcanic rock) in unplowed grasslands.

The vernal pool tadpole shrimp (VPTS, *Lepidurus packardi*) is a federally endangered species that inhabits vernal pools and swales containing clear to highly turbid water (CDFW 2025). These pools are commonly in grass bottomed swales of grasslands or in mud-bottomed pools containing highly turbid water (CDFW 2025).

In addition to VPFS and VPTS, the federally endangered conservancy fairy shrimp (*Branchinecta conservatio*) was considered. This species requires large playa-like vernal pools (large, shallow pools similar to dry lake beds) on Pescadero soils (heavy, clay-like soils), which are not present in the BSA; therefore, it is considered absent.

Protocol-level surveys were not conducted in the BSA. Database review identified numerous regional occurrences (Jepson Prairie, Travis Airforce Base, conservation banks). A separate 2022–2023 survey effort (north of the Project) detected VPFS at multiple habitats but not in the small seasonal wetland within the ROW. The Desktop Aquatic Resource Assessment mapped 38 seasonal wetlands (~0.132 acre) and 22 ephemeral/ intermittent drainages (~0.148 ac/~593 linear feet); most features are too small or short-lived to support vernal pool branchiopods, but the seasonal wetland near PM 16.9 may provide moderate quality habitat. Ephemeral/intermittent drainages are those lasting for only a short amount of time. Based on regional records and mapped features, VPFS and VPTS have moderate potential to occur. CNDDB also documents an occurrence of California fairy shrimp at PM 14.5. There are 11 CNDDB records of VPFS and 20 CNDDB records of VPTS within 5 miles of the ROW. While the BSA wetlands are small and ephemeral, this record indicates regional presence. Suitable habitat within the BSA is marginal, and potential presence of these species is

considered low. Overall, there is 0.069 acre of VPFS habitat and 0.026 acre of combined VPTS/VPFS habitat within the BSA.

Proposed Project activities with the potential to impact vernal pool branchiopods, including VPFS and VPTS, are limited to work occurring within or adjacent to seasonal wetlands and vernal pool/swale features within the project footprint. Activities with the potential to affect vernal pool branchiopod habitat include culvert replacement and extension, FES upgrades, installation of RSP, inlet adjustments, limited shoulder widening between PM 17.0 and PM 17.4, and associated construction access.

Temporary impacts to vernal pool branchiopod habitat may occur from short-term ground disturbance from construction activities near vernal pools and swales. These activities may temporarily disturb the edges of seasonal wetlands or vernal pool basins through soil compaction, vegetation disturbance, or temporary changes in surface conditions during construction. Based on the impact analysis, temporary impacts to VPFS habitat total approximately 840 square feet (sqft), and temporary impacts to VPTS habitat total approximately 195 sqft (Table 3-1).

Permanent impacts to vernal pool branchiopod habitat are anticipated only in locations where extending culverts results in the permanent conversion of small portions of seasonal wetland or vernal pool/swale features. Permanent impacts are limited to locations where culvert extensions occur within vernal pool branchiopod habitat as part of shoulder widening activities. Based on the impact analysis, permanent impacts to VPFS habitat total approximately 20 sqft, and permanent impacts to VPTS habitat total approximately 9 sqft (Table 3-1). No other proposed Project components would result in permanent impacts to vernal pool branchiopod habitat.

Table 3-1: Impacts to Vernal Pool Branchiopod Habitat

Habitat Type	Permanent Impact (sqft)	Temporary Impact (sqft)
VPFS Habitat	20	840
VPTS Habitat	9	195

The following Project Features would be implemented:

- PF-BIO-2: Mark ESAs

The following Avoidance and Minimization Measures would be implemented to reduce impacts to vernal pool branchiopods:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring

Technical assistance (via email) between Caltrans and USFWS staff on February 12, 2026, communicated USFWS' expectations that dry season work windows (limiting construction only to the dry season) alone would not support a "not likely to adversely affect" determination for vernal pool branchiopods.

With the following mitigation incorporated, the proposed Project would have a less than significant impact on vernal pool fairy shrimp and vernal pool tadpole shrimp:

- MM-BIO-1: Compensation to Offset Permanent Project Impacts
- MM-BIO-2: Wetland Mitigation Monitoring

The proposed Project would have no impact on other vernal pool branchiopods.

California Tiger Salamander

California tiger salamander (CTS; *Ambystoma californiense*) is both state and federally listed as a threatened species (CDFW 2025). CTS are large, terrestrial salamanders most commonly found in annual grassland habitat. CTS are typically associated with vernal pools or similar habitats consisting of seasonal pools or ponds (including constructed ponds and similar water bodies that dry out in summer) surrounded by grasslands. Adults spend most of their lives underground in small mammal burrows, which are a required habitat element (Loredo et al. 1996). CTS are relatively poor burrowers and require refugia provided by ground squirrels and other burrowing mammals. CTS aestivate (become dormant) in burrows during the dry months.

CTS require two major habitat components: aquatic breeding sites and nearby terrestrial aestivation or refuge sites. The breeding sites are usually ephemeral pools (e.g., vernal pools), but water must remain present long enough for metamorphosis to occur. While ideal breeding habitat consists of bodies of water that fill in winter and are dry by summer, CTS can also be found in any body of water, even roadside ditches (USFWS 2003b). After winter rains have moistened the ground (usually November or December), the salamanders emerge from their refugia and migrate to breeding pools.

CTS spend most of their post-metamorphic (juvenile and adult) life underground in small mammal burrows in grasslands and woodlands. During summer months, they reside in subterranean refuge sites. Because of the need for upland aestivation sites, CTS inhabit grasslands and open oak woodlands in central and northern California where these types of refugia are available. Uplands are terrestrial areas that lie at higher elevations above floodplains.

No protocol-level surveys were conducted within the BSA. Database review identified numerous CTS occurrences within five miles, including breeding occurrences north of

the roadway (Jepson Prairie/conservation banks) and historical larval observations south/southwest of the proposed Project vicinity.

The BSA supports 34.61 acres of suitable upland CTS habitat. The Desktop Aquatic Resource Assessment mapped 38 seasonal wetlands (~0.132 acre) and 22 ephemeral/intermittent drainages (~0.148 acre / ~593 linear feet) within the ROW. Most features are too small or ephemeral to support successful breeding; however, two culvert outlet pools and one seasonal wetland near PM 16.9 may function as marginal to moderate quality aquatic habitat in wet years.

No CTS were observed during 2025 field visits. Considering regional occurrences, upland burrow availability, and limited seasonal water features, CTS has moderate potential to occur within the BSA.

Proposed Project activities that may affect CTS include culvert replacement and extension, FES upgrades, culvert lining, RSP installation, limited shoulder widening between PM 17.0 and 17.4, and the installation of stormwater TBMPs such as biofiltration strips. These activities would primarily result in temporary ground disturbance within CTS upland habitat and along the margins of seasonal aquatic features associated with culverts, drainages, and stormwater TBMP locations.

Flared end section upgrades, culvert lining, RSP installation, and shoulder widening will require temporary work areas that could include clearing and grubbing, excavation, grading, and equipment access. These activities could temporarily disturb or crush small mammal burrows used by CTS for refuge and aestivation and could crush CTS if present in burrows. Stormwater TBMP creation will require digging an estimated one to three feet below ground surface to amend soil, which would disturb burrows and may harm CTS if present in excavated burrows. Small mammals will be able to reestablish burrows after TBMP construction is complete. CTS could also attempt to cross through work areas, particularly during the breeding season. Temporary impacts to aquatic habitat may occur where work is adjacent to or within seasonal wetlands or drainages that could provide marginal or opportunistic breeding habitat (e.g., near the seasonal wetland at approximately PM 16.9).

Permanent impacts to CTS habitat may occur where proposed Project elements result in long-term modification of upland habitat, including the permanent footprint of shoulder widening, culvert extensions, and RSP installation. These activities will result in permanent loss of upland habitat and could harm individuals present in burrows. No permanent loss of known CTS breeding ponds is anticipated.

The proposed Project will temporarily impact 1.10 acres and permanently impact 0.24 acres of upland CTS habitat (Table 3-2). It will also temporarily impact <0.01 acre (169

sqft) of aquatic CTS habitat (Table 3-2).

Table 3-2: Impacts to California Tiger Salamander Habitat

Habitat Type	Permanent Impact (acre)	Temporary Impact (acre)
Upland Habitat	0.24	1.10
Aquatic Habitat	0	<0.01

The following Project Features would be implemented:

- PF-BIO-1: Wildlife Exclusion Fencing
- PF-BIO-2: Mark ESAs
- PF-BIO-5: Prevention of Inadvertent Entrapment and Entanglement

The following Avoidance and Minimization Measures would be implemented to reduce impacts to CTS habitat:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring
- AMM-BIO-7: Temporary Covered Species Barrier
- AMM-BIO-8: Inspection of Pipes and Culverts
- AMM-BIO-9: Open Trenches and Keyways Inspection

Additionally, Caltrans will apply for an Incidental Take Permit (ITP) from CDFW during the Design phase of the proposed Project since construction activities may crush or kill CTS.

With the following mitigation incorporated, the proposed Project would have a less than significant impact on the California tiger salamander:

- MM-BIO-1: Compensation to Offset Permanent Project Impacts
- MM-BIO-2: Wetland Mitigation Monitoring

California Red-legged Frog

The California red-legged frog (CRLF; *Rana draytonii*) is a federally threatened species under FESA (USFWS 1996). CDFW also designated the CRLF as a species of special concern (SSC) (Jennings and Hayes 1994).

The CRLF is distributed throughout 26 counties in California but is most abundant in the San Francisco Bay area. The species' known range currently includes drainages from the Santa Ynez Mountains in Santa Barbara County north to the Russian River in Mendocino County, with additional isolated populations in the Sierra Nevada foothills,

eastern Transverse Ranges, and the Sierra de San Pedro Mártir in Baja California, Mexico. Within Solano County, CRLF is documented in areas north and west of I-80 and I-680. Current understanding of its range does not include the proposed Project site.

California red-legged frog predominantly inhabits water sources, including creeks, lakes, natural and human-made ponds, drainages, marshes, lagoons, and ephemeral or permanent streams, and can be found in valley bottoms and foothills up to 4,900 feet in elevation (Jennings and Hayes 1994, Bulger et al. 2003, Stebbins 2003). Breeding aquatic habitat consists of low-gradient freshwater bodies. Typical aquatic habitat includes natural and human-made ponds, slow-moving streams and creeks, pools within streams, marshes, lagoons, and other ephemeral or permanent streams. These water bodies must hold water for 11 to 20 weeks from March through July for the completed development of tadpoles (USFWS 2006, USFWS 2010).

Non-breeding aquatic habitat includes wetlands, plunge pools (deep depressions at the base of waterfalls), seeps (areas where groundwater diffuses), calm stream alcoves (off-channel areas of streams with low flow), and springs with sufficient flow to withstand the dry season (USFWS 2006). Non-breeding aquatic habitat provides shelter, accommodates foraging, and facilitates dispersal for juveniles and adults.

Upland habitat includes plant communities such as grasslands, woodlands, wetlands, and riparian habitat within approximately 2.0 miles of suitable breeding locations and a permanent water source (Bulger et al. 2003). These plant communities provide shelter and suitable prey. Upland habitat provides connectivity between breeding and aquatic non-breeding habitat. Suitable upland habitat does not include physical barriers.

Dispersal habitat includes upland or riparian habitat linked to subpopulations of CRLF (USFWS 2006). Agricultural lands such as row crops, orchards, vineyards, and pastures also facilitate dispersal (USFWS 2010). Habitat fragmented by heavily traveled roads, moderate- to high-density urban developments, high-flowing or wide streams, and reservoirs over 50 acres in size do not constitute suitable dispersal habitat (USFWS 2010).

Current understanding of CRLF range does not include the proposed Project site. No CRLF CNDDB occurrences within 5 miles of the BSA. No protocol-level surveys were conducted within the BSA. The Desktop Aquatic Resource Assessment documents seasonal wetlands and ephemeral drainages that dry during summer and are unlikely to be sufficiently deep or wet long enough to support breeding. A seasonal wetland near PM 16.9 may provide limited non-breeding aquatic habitat; upland grassland could support occasional dispersal in wet years if CRLF were to occur. Several transportation projects along SR 12 (EAs 2Q550, 0T10U, 3Y050, 0K100, and 4AC90) have

documented CRLF habitat evaluations; however, none identified suitable breeding habitat within or adjacent to the 0AA53 BSA. The BSA is outside of currently understood CRLF range and lacks nearby breeding habitat. CRLF is not expected to occur within the BSA. Technical assistance (via email) between Caltrans and USFWS staff on February 12, 2026, communicated USFWS' understanding that the BSA is outside of current range, such that CRLF is not expected in the proposed Project area.

The proposed Project would have no impact on California red-legged frog.

Other Invertebrates

Other invertebrates with regional records or potential habitat were also evaluated based on habitat conditions in the BSA. The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) requires elderberry shrubs, which are absent from the BSA. The monarch butterfly (*Danaus plexippus*) requires milkweed for breeding, which was not observed during 2025 surveys; therefore, the species is considered absent. The western bumble bee (*Bombus occidentalis*) has low potential to occur given the ruderal vegetation (hardy plants that grow immediately following disturbance) in the BSA and scarcity of suitable floral resources.

The proposed Project would have no impact on the valley elderberry longhorn beetle, monarch butterfly, and western bumble bee.

Swainson's Hawk

The Swainson's hawk (SWHA, *Buteo swainsoni*) is a state threatened species (CDFW 2025). SWHA breed in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees (CDFW 2025). They require adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations (CDFW 2025).

SWHA require large, open grasslands with abundant prey in association with suitable nest trees. SWHA often nest adjacent to riparian systems of the valley as well as utilizing lone trees or groves of trees in agricultural fields. Suitable nest sites may be found in mature riparian forest, lone trees or groves of oaks, other trees in agricultural fields, and mature roadside trees. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. SWHA return from migration to breed in California in March and most migrate out of California in September, with a small number of mostly dark-morph individuals remaining in the Delta region through the winter (England et al. 1997).

No protocol-level surveys for SWHA were conducted within the BSA. CNDDB records identified multiple historical and recent occurrences of SWHA within the project vicinity. One occurrence recorded in 2007 was located approximately 3,300 feet east of the Rio Dixon Road and SR 12 intersection. An additional occurrence observed in August 2019 was located approximately 300 feet north of the Rio Dixon Road and SR 12 intersection, representing the closest documented record to the Project. Another 2007 occurrence was recorded at the McCloskey Road and SR 12 intersection, approximately 2,270 feet east of PM 20.68. CNDDB documents nesting occurrences at PM 19.0, PM 19.7, and PM 21.2, supporting the determination of high potential for occurrence wpi;d the BSA. Suitable grassland habitat that may be used for foraging by SWHA is present within and adjacent to the BSA. In addition, trees along the project vicinity may provide potential nesting habitat for this species. Based on the presence of suitable foraging habitat and nearby occurrence records, SWHA has a high potential to occur within the BSA.

Proposed Project activities will temporarily disturb grassland foraging habitat for SWHA that nest near the BSA. The amount of grassland foraging habitat permanently affected by shoulder widening, culvert extensions or other minor changes by the project are negligible compared to the amount of grassland habitat available in the BSA and surrounding environment. Tree removal is not proposed, and therefore there will be no permanent impacts to potential nesting areas. There is some potential for construction to result in temporary disturbance to nesting activity if active nests occur near the BSA. Given nearby nesting records and suitable habitat, the proposed Project would impact SWHA primarily through temporary disturbance to foraging habitat.

Compensatory mitigation is not required, as impacts are limited to temporary disturbance of foraging habitat and potential construction-related disturbance to nesting. Final requirements will be determined in consultation with CDFW if active nests are identified.

The following Project Features would be implemented:

- PF-BIO-3: Nesting Bird Surveys

The following Avoidance and Minimization Measures would be implemented to reduce impacts to SWHA:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring
- AMM-BIO-6: Night Lighting
- AMM-BIO-10: Swainson's Hawk Assessment and Avoidance

The proposed Project would have a less than significant impact on Swainson’s hawk.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is a state threatened species that is largely endemic to California and is also an SSC (CDFW 2025). Tricolored blackbirds are highly colonial species and are most numerous in the Central Valley and vicinity (CDFW 2025). Tricolored blackbirds require open water, protected nesting substrate, and foraging areas with insect prey within a few kilometers of the colony (CDFW 2025).

In most years, the Central Valley alone holds greater than 90 percent of all breeding adults (Zeiner et al. 1990, updated 2008). During winter, virtually all birds from outside the state, except a few in Oregon, withdraw to concentrate in the California breeding range. For breeding site selection, the species requires open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony. Nests may be located up to four miles (6.4 kilometers) from foraging areas (Zeiner et al. 1990, updated 2008). All life stages require an insect and/or vegetative food source, and the species has shifted to using agricultural-associated habitats to replace and/or supplement their foraging needs. Alfalfa, rice patties, open rangeland/cattle pasture, annual grassland, hay fields, and sunflower have all been documented as adequate foraging habitats for insects; and silage fields, stored grains, and rice provide vegetative diet items (USFWS 2019). The tricolored blackbird has also shifted to using nonnative vegetation such as Himalayan blackberry, milk thistle, mallow, giant reed, and other Eurasian weeds in irrigated pastures, stock ponds, along drainages, and in upland habitats for nesting substrate. Nonbreeding congregations of tricolored blackbirds are often found in wetland habitats near abundant food sources such as rice fields, pastureland, recently cultivated cropland, and grain stores at dairies (USFWS 2019).

No protocol-level surveys were conducted for tricolored blackbird within the BSA. There are multiple occurrences of tricolored blackbird colonies within and surrounding the proposed Project vicinity. CNDDB records document colonies within three to five miles of the proposed Project, including occurrences at Potrero Hills Lane and Union Creek. While the BSA does not contain extensive emergent marsh, nearby wetlands provide suitable nesting substrate, and grasslands within the BSA may provide foraging habitat. There are some small, isolated wetland habitats within the BSA that provide marginally suitable habitat for tricolored blackbirds, but it is unlikely for them to colonize in the BSA. Based on regional occurrences and limited suitable habitat, tricolored blackbird has moderate potential to occur in the proposed Project vicinity, but low potential to nest in the BSA.

Proposed Project activities (culvert replacement, FES upgrades, RSP installation) would temporarily disturb grasslands and wetlands that may be used for foraging. While large breeding colonies are unlikely in the BSA due to the limited extent of emergent marsh, disturbance to foraging habitat could occur. The proposed Project may affect tricolored blackbird through temporary disturbance of foraging habitat and potential disturbance to nesting colonies nearby. However, the project is not expected to remove nests or colonies.

The following Project Features would be implemented:

- PF-BIO-3: Nesting Bird Surveys

The following Avoidance and Minimization measures would be implemented to reduce impacts to tricolored blackbird:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring
- AMM-BIO-6: Night Lighting

No compensatory mitigation is proposed for the tricolored blackbird.

The proposed Project would have a less than significant impact on the tricolored blackbird.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a state candidate to be listed as an endangered species. Burrowing owls are also protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC), which prohibit take of individuals (including active nests). The burrowing owl is a small, ground-dwelling owl of open country (Poulin et al. 2020). It prefers annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, burrowing owls are found in close association with California ground squirrels; owls use the abandoned burrows of ground squirrels for shelter and nesting (Coulombe 1971). The nesting season as recognized by CDFW runs from February 1 through August 31. After nesting is completed, adult owls may remain in their nesting burrows or in nearby burrows, or they may migrate (Gorman et al. 2003); young birds typically disperse across the landscape up to 30 miles from their natal burrows (Rosier et al. 2006).

Foraging habitat includes cropland, pastures, fallow fields, and areas with vegetation greater than one meter tall. There are multiple occurrences of burrowing owl within and surrounding the proposed Project vicinity. An April 22, 2026 survey looked for evidence

of nesting at culverts with work planned and looked for evidence of small mammal burrows in the widening area. The survey found no evidence of nesting in the BSA, and limited small mammal burrow availability in the widening area. Additionally, pre-construction surveys will be conducted as outlined in AMM-BIO-1.

CNDDB records document historical and recent occurrences in the proposed Project vicinity, including one record within the BSA (1993 at Olsen Road/Little Honker Bay Road), another from 2023 within approximately one mile, and additional records at PM 13.5 and PM R17.1 near the proposed Project corridor. The BSA consists of ~42 acres of suitable annual grassland with abundant small mammal burrows that could provide nesting and wintering habitat. No active burrows or owls were observed during February 12 and 25, 2025, or April 22, 2026 surveys. Based on available habitat and regional records, burrowing owl has moderate potential to occur in the BSA.

Proposed Project activities (culvert replacement, RSP installation, shoulder widening) would temporarily disturb grasslands and mammal burrows. Direct impacts to occupied burrows could occur if owls are present during construction. Given suitable habitat and nearby records, the proposed Project has a moderate potential to impact burrowing owl through temporary disturbance of potential nesting and roosting habitat.

The following Project Features would be implemented:

- PF-BIO-3: Nesting Bird Surveys

The following Avoidance and Minimization Measures would be implemented to reduce impacts to the burrowing owl:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring
- AMM-BIO-5: Nest Discovery.
- AMM-BIO-6: Night Lighting
- AMM-BIO-11: Western Burrowing Owl Pre-Construction Surveys

Compensatory mitigation is not required. Approximately 0.3 acre of grassland will be permanently converted to roadway shoulder between PM 17.0 and 17.4 due to widening. While this represents a small footprint, it constitutes a permanent loss of potential burrowing owl foraging and nesting habitat.

With implementation of Project Features and consideration of the limited extent of permanent habitat impacts, the proposed Project would have a less than significant impact on the burrowing owl.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is classified as a California SSC (CDFW 2025). Pallid bats range from southern British Columbia through Montana to central Mexico. They occur from the Okanagan Valley in British Columbia, south through eastern Washington, Oregon, and California to Baja California Sur, Sonora, Sinaloa, Nayarit, Jalisco, Queretaro, and Nuevo Leon in Mexico. They are found as far east as western Texas, Oklahoma, southern Kansas, southern Wyoming, and southern Idaho. There is a disjunct population on the island of Cuba (Verts and Carraway 1998, Nowak 1999).

Pallid bats are also called desert bats because they are mostly found in desert habitats. They roost in a variety of places but favor rocky outcrops. They also occur in oak and pine forested areas and open farmland. Roosting sites are variable, depending on what is available. They can be found roosting in caves, rock crevices, mines, hollow trees, and buildings. Breeding in California typically occurs during the month of August until September.

A bat roost habitat assessment was conducted in December 2024. No roosting bats or signs of bat use (e.g., guano, staining) were observed. However, the following suitable habitat was documented:

- Crevice roosts in culvert joints, bridge abutments, and cliff swallow nests.
- Open cavity roosts in box culverts.
- Foliage roosts in a Fremont cottonwood and eucalyptus trees near the BSA.

Of 53 culvert and bridge locations surveyed, 13 had moderate-quality roost habitat and 40 had low-quality roost habitat. Based on regional presence of special-status species and availability of suitable habitat, pallid bat, Townsend's big-eared bat, western red bat, and *Myotis* spp. all have moderate potential to occur in the BSA.

Of the seven culverts with proposed work, one contains moderate-quality roost habitat and six contain low-quality roost habitat. An April 22, 2026 survey searched for evidence of maternity roosts at the seven culverts with proposed work. No evidence of maternity roosts was found at any of the seven culverts.

Proposed Project activities (culvert replacement, lining, FES upgrades, RSP installation, shoulder widening) may temporarily disturb culverts, bridges, and trees that provide roosting habitat. If roosts are occupied, disturbance or displacement of bats could occur. Given the presence of moderate-quality roost features in the BSA, the proposed Project would impact bats through temporary disturbance to potential roosting habitat.

The following Avoidance and Minimization Measures would be implemented to reduce impacts to the pallid bat:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring

Compensatory mitigation is not required for bats. If active roosts are identified, a bat roost protection plan and additional avoidance measures may be required in coordination with CDFW.

The proposed Project would have a less than significant impact on the pallid bat.

Northwestern Pond Turtle

The northwestern pond turtle (NWPT, *Actinemys marmorata*) is a California SSC and is proposed to be listed as threatened at the federal level (CDFW 2025). NWPT's range includes the area from Puget Sound, Washington south to Mexico (USFWS 1993). The northwestern subspecies includes those that are located in the Sacramento Valley and San Francisco Bay area north to Puget Sound (USFWS 1993). NWPT ranges from uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. They are observed in elevations ranging from near sea level to 1,430 m (4,690 feet), and usually leave the water only to reproduce, aestivate, and overwinter (Jennings and Hayes 1994).

Habitat for the NWPT includes streams, ponds, lakes and permanent and ephemeral wetlands (CDFW 2025). They spend most of their lives in water, but they also require terrestrial habitats for nesting. (CDFW 2025). Nesting occurs from late May until the middle of July (CDFW 2025). Suitable nest sites usually have dry soils, sparse vegetation, and a southern exposure (CDFW 2025).

NWPT are assumed to occur in the BSA based on records 1-3 miles away in Denverton Creek and nearby sloughs. Within the BSA, there are no permanent aquatic features suitable for foraging and breeding. The Big Ditch, a stream originating near Lindsey Slough, may provide marginally suitable dispersal habitat in wet years during winter. Overall, however, there is a lack of suitable aquatic habitat and low potential for the species to occur within the proposed Project footprint.

The proposed Project would repave existing roadway near and over The Big Ditch, including shoulder backing which would not exceed approximately three feet from the edge of pavement. These work activities would not impact NWPT habitat. If NWPT were using The Big Ditch to disperse at the time of construction, the individual could

experience temporary behavioral modification as a response to noise or visual activity. Likelihood of presence and impact at The Big Ditch is low. No impacts are expected from other activities or at other locations.

Compensatory mitigation is not required for NWPT due to low potential for occurrence and the absence of high-quality aquatic habitat.

The proposed Project would have a less than significant impact on the northwestern pond turtle.

Golden Eagle

Golden eagle is a fully protected species in California. Under CDFW regulations, there can be no take (defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") or possession of fully protected species.

Golden eagle typically nests in trees, cliffs, or other elevated structures. No protocol-level surveys were conducted for this species within the BSA. However, no suitable foraging habitat (tall marsh vegetation, trees, or cliffs) exists within the ROW. Based on habitat conditions, golden eagle has low potential to occur in the BSA. Five active golden eagle nests were reported within five miles of the proposed Project between 2001 and 2014 and one occurrence was reported in 1984. Five of these nests were observed as destroyed or inactive in 2016. No golden eagles have been observed within five miles of the proposed Project within the past five years. Construction activities would not capture or kill golden eagle.

The following Project Features would be implemented to ensure that no golden eagle nests are disturbed during construction:

- PF-BIO-3: Nesting Bird Surveys

The proposed Project would have no impact on the golden eagle.

Other Raptors

Northern harrier, ferruginous hawk, and short-eared owl are recognized in California as SSC. These raptors and owls require large expanses of open habitat for foraging. Northern harrier and short-eared owl may nest in tall grasslands or marsh vegetation, while ferruginous hawks typically nest in trees, cliffs, or other elevated structures.

No protocol-level surveys were conducted for these species within the BSA. CNDDB records document occurrences of northern harrier and ferruginous hawk within five miles of the proposed Project, primarily associated with the Suisun Marsh and

surrounding grasslands. Suitable foraging habitat occurs within the BSA's ~42 acres of annual grassland. However, no suitable nesting habitat (tall marsh vegetation, large nest trees, or cliffs) occurs within the ROW. Based on habitat conditions, these species have low potential to occur in the BSA.

Proposed Project activities (culvert replacement, RSP installation, shoulder widening) will temporarily disturb grasslands that may be used for foraging. Nesting impacts are not expected due to lack of suitable habitat within the ROW. The proposed Project may affect raptors through temporary disturbance to foraging habitat but is not expected to impact nesting.

The following Project Features would be implemented:

- PF-BIO-3: Nesting Bird Surveys

The following Avoidance and Minimization Measures would be implemented to reduce impacts to other raptors:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring
- AMM-BIO-6: Night Lighting

Compensatory mitigation is not required, as impacts are limited to temporary disturbance of foraging habitat and no nesting habitat will be affected.

The proposed Project would have a less than significant impact on northern harrier, ferruginous hawk, and short-eared owl.

American Badger

The American badger (*Taxidea taxus*) is a California SSC (CDFW 2025). The American badger is most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with soils that crumble easily. Their habitat needs to have sufficient food, suitable soils and open, uncultivated ground. They prey on burrowing rodents and dig burrows.

No protocol-level surveys for American badger were conducted within the BSA. The CNDDB includes regional records within five miles of the proposed Project. The BSA consists of ~42 acres of annual grassland with friable soils that could provide potential habitat. The species is wide-ranging, using a broad range of habitats and large home ranges. No burrows or sign of badger activity were observed during 2025 surveys. The likelihood of burrow use within the BSA is low. Based on habitat conditions and regional records, American badger has low potential to occur in the BSA.

Proposed Project activities (culvert replacement, shoulder widening, RSP installation) may temporarily disturb grasslands within the BSA. If badgers were present, they could be displaced or disturbed by construction. However, likelihood of active burrow use is low, and no active burrows were identified during surveys. The proposed Project may affect badgers through temporary disturbance to potential habitat, but direct impacts are unlikely.

The following Avoidance and Minimization Measures would be implemented to reduce impacts to the American Badger:

- AMM-BIO-1: Pre-construction Surveys
- AMM-BIO-3: Biological Monitoring

No compensatory mitigation is required for the American badger.

The proposed Project would have a less than significant impact on the American badger.

b), c) Less Than Significant with Mitigation Incorporated

Sensitive natural communities mapped within or adjacent to the BSA include annual grassland, valley needlegrass grassland, vernal pool/swale complexes, northern claypan vernal pool, freshwater emergent wetlands, and riparian scrub, which are considered regionally important due to their ecological functions and associations with special-status species.

Proposed Project activities in jurisdictional drainages, including culvert replacement, FES upgrades, and installation of RSP, may result in temporary disturbance to mapped aquatic features within the BSA.

Proposed Project activities with the potential to affect aquatic resources are limited to work occurring at or adjacent to jurisdictional drainages within the Caltrans ROW. These activities include culvert replacement and extension, FES upgrades, installation of RSP, and adjustment of inlets to grade, as well as shoulder widening between PM 17.0 and PM 17.4 where culvert extensions are required.

Temporary impacts to aquatic resources may occur from excavation, grading, and equipment access associated with culvert work and drainage improvements. Shoulder widening results in aquatic impacts only where culvert extensions intersect existing drainages; upland cut slopes associated with widening do not affect aquatic resources.

Permanent impacts to aquatic resources are anticipated only where existing culverts are extended, including at approximately PM 17.0, PM 17.15, and PM 17.3, as part of

shoulder widening. These culvert extensions would result in a permanent increase in culvert length and a corresponding permanent impact to aquatic habitat at those drainage crossings. All other culvert-related activities, including FES replacement, RSP installation, and inlet adjustments, will be performed largely in kind and are expected to result in temporary impacts only.

Guardrail upgrades, concrete vegetation control, traffic signing, pavement delineation, and other pavement rehabilitation activities do not affect aquatic resources, as they occur outside aquatic features. Construction staging and access areas will be located outside aquatic resources to the maximum extent practicable.

The proposed Project would have direct impacts to a total of 0.12 acres of wetlands and 0.20 acres of waters of the U.S. and waters of the state (Tables 3-3 & 3-4). It would also result in permanent impacts to a total of 0.12 acres of wetlands and 0.001 acres of waters of the U.S. and waters of the state (Tables 3-3 & 3-4). None of these waters are subject to CDFW jurisdiction under Fish and Game Code Sections 1600 et seq.

The proposed Project would have a less than significant impact with mitigation incorporated to riparian habitat or other sensitive natural communities and state/federally protected wetlands with the following Mitigation Measures incorporated:

- MM-BIO-1: Compensation to Offset Permanent Project Impacts
- MM-BIO-2: Wetland Mitigation Monitoring

Table 3-3: Temporary Aquatic Resource Impacts

Aquatic Feature	Area (acres)	USACE (acres)	SWRCB/ RWQBC (acres)	CDFW (acres)
Wetlands	0.012	0.012	0.012	0
Other waters	0.021	0.021	0.021	0

Table 3-4: Permanent Aquatic Resource Impacts

Aquatic Feature	Area (acres)	USACE (acres)	SWRCB/ RWQBC (acres)	CDFW (acres)
Wetlands	0.001	0.001	0.001	0
Other waters	0.001	0.001	0.001	0

d) Less Than Significant Impact

The culvert replacements would not create or maintain an existing fish passage barrier, and the culverts associated with the proposed Project are inaccessible to migrating fish. Furthermore, drainages and culverts in the proposed Project footprint potentially provide passage for small vertebrates to medium-sized mammals.

The proposed Project would not create any new features that would impede the movement of wildlife. After Project completion, it is expected that animals would be able to use the culverts in the proposed Project area to pass underneath the road and avoid hazards associated with vehicle traffic. The culverts also may provide opportunities for cover and areas to escape from predators. Therefore, no permanent impacts on wildlife movement are expected to occur as a result of the proposed Project. There would be a less than significant impact.

e) No Impact

The proposed Project would not adversely affect any biological resources that are protected by any local policies or ordinances. There would be no impact.

f) No Impact

The proposed Project limits are not located within the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. In 2012, Solano County adopted the 30-year Solano Multispecies Habitat Conservation Plan (Solano County Water Agency n.d.); however, the plan has not been finalized and does not apply to the proposed Project. Therefore, there would be no impact as a result of the proposed Project.

Avoidance and Minimization Measures

AMM-BIO-1: Pre-construction Surveys. An approved biologist will conduct pre-construction surveys for special-status species as needed. A visual encounter survey will be conducted immediately before ground disturbing activities. Suitable habitat within the proposed Project alignment will be visually inspected.

AMM-BIO-2: Special-Status Species. If special-status species are encountered in the proposed Project alignment, work within 50 feet of the animal will cease immediately, and the Resident Engineer and approved biologist will be notified. Based on the professional judgment of the biologist, if proposed Project activities can be conducted without harming or injuring the animal, it may be left at the location of discovery and monitored by the biological monitor. Project personnel will be notified of the finding, and at no time will work occur within 50 feet of the animal without a biological monitor present.

AMM-BIO-3: Biological Monitoring. An approved biologist will be present during construction activities where take of a listed species could occur. Through communication with the Resident Engineer or designee, the approved biologist may

stop work if deemed necessary for any reason to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed.

AMM-BIO-4: Worker Environmental Awareness Program. Prior to the start of construction, a biologist will provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later will receive the same training before beginning work. Upon completion of the education program, employees will sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the proposed Project, ESAs within the proposed Project site, and notes key avoidance measures, as well as employee guidance will be given to each person who completes the training program. These forms will be made available to the resource agencies upon request.

AMM-BIO-5: Nest Discovery. If an active burrow is identified during pre-construction surveys, Caltrans will implement an avoidance-first strategy consistent with the CDFW's March 7, 2012 Staff Report on Burrowing Owl Mitigation (Staff Report). Per the Staff Report, Caltrans' strategy would include measures such as avoiding impacts to burrows, establishing a buffer around burrows, and visual screens. If Caltrans finds that an avoidance-first strategy is not possible, such that burrowing owl take as defined by California Fish and Game Code Section 86 is unavoidable, Caltrans would establish a buffer around the burrow and request an Incidental Take Permit from CDFW.

AMM-BIO-6: Night Lighting. During nighttime work for project construction, night lighting shall be used only in the area actively being worked on and shall be focused on the direct area of work. Lighting fixtures should incorporate fully shielded (full-cutoff) or zero uplight to reduce light spill and glare into natural habitat. Lighting will be limited to the minimum illumination necessary to maintain safe working conditions and will be directed toward the active construction area and away from natural areas. Caltrans will coordinate further with CDFW on construction lighting during the Design phase and permitting.

AMM-BIO-7: Temporary Covered Species Barrier. Prior to construction a wildlife exclusion fence plan shall be provided to CDFW for review and written approval. Upon approval, exclusion fencing shall be installed prior to the start of groundbreaking work to prevent California tiger salamander from dispersing into the Project Area. Exclusion fencing shall be designed to allow California tiger salamander to leave the Project Area using a one-way funnel or other method approved by CDFW. Exclusion fencing shall remain in place during groundbreaking construction work and shall be removed within 30 days after completion of this work.

A qualified biologist or other trained staff shall inspect exclusion fencing daily throughout all phases of the project. After each exclusion fence check, a qualified biologist or other trained staff shall prepare an exclusion fence inspection report documenting type and location of any damage to the temporary barrier. Any exclusion fence damage shall be repaired within 48 hours. As part of the wildlife exclusion fence plan, refuge opportunities, such as coverboards or straw wattles shall be provided at regular intervals along both sides of the exclusion fence.

AMM-BIO-8: Inspection of Pipes and Culverts. All construction pipes, hoses, or similar structures that could inadvertently trap wildlife (including any hollow openings of battery storage containers) stored in the Project Area for one or more overnight periods shall be either securely covered prior to storage or thoroughly inspected by a qualified biologist and/or Biological Monitor for California tiger salamander or other animals before the pipe is subsequently buried, capped, or otherwise used or moved in any way.

AMM-BIO-9: Open Trenches and Keyways Inspection. To prevent inadvertent entrapment of the California tiger salamander during construction, a qualified biologist shall check all excavated open holes, sumps, trenches, caps in culvert connections, and keyways for California tiger salamander at the start of each day for trapped animals. A qualified biologist shall ensure all excavated, steep-walled holes or trenches more than 6 inches deep are provided with one or more escape ramps. Before filling trenches or holes, a qualified biologist shall thoroughly inspect them for trapped California tiger salamander. If a California tiger salamander is discovered by a qualified biologist or anyone else, work shall stop and CDFW shall be contacted immediately.

AMM-BIO-10: Swainson's Hawk Assessment and Avoidance. If Project Activities are to be conducted between March 15 and September 15, the Permittee shall ensure a qualified biologist conducts focused surveys for Swainson’s hawk. The following criteria for surveys shall be met:

- Surveys shall be conducted within 1/4 mile of the Project Site
- Surveys shall be conducted in proposed work areas, staging, and storage areas.

Nest surveys for Swainson’s hawks shall be conducted in a manner consistent with the recommended timing and methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley. For more information, see https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds.

If an active nest is identified, a 1/4 mile no-work buffer shall be maintained around the nest until the young fledge. If any active Swainson’s hawk nests are found within a

certain distance of the Project Site, as determined during permitting, CDFW shall immediately be contacted, and all work shall halt.

AMM-BIO-11: Western Burrowing Owl Pre-Construction Surveys. An agency-approved biologist(s) would conduct pre-construction surveys for western burrowing owls prior to the breeding season (February 1 through August 31). The biologist shall inspect all burrows with typical characteristics of rodent and/or fossorial burrowing activity such as owl pellets, feathers, freshly turned dirt, animal tracks, fur, or white markings and provide the results to CDFW prior to the initiation of construction. Caltrans shall follow the pre-construction survey monitoring schedule and requirements noted in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW Staff Report). For more information see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline.

If it is evident that the burrows are active within the buffers described in the CDFW Staff Report, Caltrans shall notify CDFW and fully avoid species by clearly delineating an Environmental Sensitive Area (ESA) and no-disturbance around all burrowing owl burrows within the proposed Project area. A current map of burrowing owl nesting and/or wintering locations on and near the project shall be kept on site at all times. Caltrans shall remove and properly dispose of all materials used for delineation immediately upon completion of the proposed Project.

Mitigation Measures

MM-BIO-1: Compensation to Offset Project Permanent Impacts. To prevent significant impacts from the proposed Project, Caltrans will implement a compensation package based on the estimated impacts on protected natural resources, including wetlands, other waters, and suitable habitat in the range of the listed species. Compensation will be determined in coordination with the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW) during the design phase. At a minimum, the compensation will be a 1:1 ratio, with ratios determined during Consultation and permit processes. Caltrans will follow an approach of prioritizing (1) bank credits, (2) in-lieu fee program credits, then (3) permittee-responsible mitigation. Bank credits are currently available, and are expected to be available, to use for impacts to wetlands, CTS, and vernal pool branchiopods. Caltrans expects to purchase bank credits as compensatory mitigation for impacts to wetlands, CTS, and vernal pool branchiopods. In case bank credits are not available at the time for wetland impacts, in-lieu fee program credits are expected to be available. In case all credit options are unavailable for any of these biological resources, on-site or off-site permittee-responsible mitigation would be pursued, such as habitat restoration or preservation.

MM-BIO-2: Wetland Mitigation Monitoring. After construction, Caltrans would restore temporarily disturbed wetland habitats and monitor onsite revegetation at these locations as well as any locations where additional wetland enhancement or restoration is implemented as compensatory mitigation. Reports to environmental regulatory agencies on the status of monitoring following Project completion would be submitted as determined in Project permits and authorizations. The Caltrans mitigation requirement would be considered satisfied once the target acreage of wetland habitat to be restored is successful, as determined and approved by the regulatory agencies requiring compensatory mitigation.

3.1.5 Cultural Resources

Would the proposed Project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

Caltrans completed a cultural resources study for the proposed Project in a manner consistent with Caltrans' regulatory responsibilities under the 2024 *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, the United States Army Corps of Engineers' Sacramento District, San Francisco District, and Los Angeles District, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Programmatic Agreement). A Section 106 Screening Memorandum (Caltrans 2025c) was issued for the proposed Project. This section summarizes the findings of this review.

a), b), and c) No Impact

Caltrans reviewed all proposed Project elements and conducted a record search in order to identify historical resources within the proposed Project area and found that the proposed Project had no potential to affect resources eligible or potentially eligible for inclusion in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). Human remains are not anticipated within the proposed Project area. In the event that human remains are discovered, PF-CULT-2 will be implemented. Therefore, the proposed Project would have no impact to historic properties or historical resources and is not anticipated to impact any human remains.

3.1.6 Energy

Would the proposed Project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

An Energy Analysis Report (Caltrans 2025d) was completed for the proposed Project. This section summarizes the findings of this review.

Activities that consume energy also generate by-products. Greenhouse Gases (GHGs) are the most closely studied by-products of energy consumption because they are linked to climate change. To assess energy consumed by construction equipment and vehicles, the Construction Emissions Tool (CAL-CET 2021), version 1.0.3, developed by the California Department of Transportation, was used to quantify carbon dioxide (CO_2) emissions. The Environmental Protection Agency (EPA) GHG equivalencies formulas were used to convert CO_2 to fuel volumes. It is assumed that diesel will be used by all construction equipment and diesel, gasoline and electricity will be used for worker's commute and construction vehicles.

a) and b) No Impact

The proposed Project would not conflict with a state or local plan for renewable energy or energy efficiency. Fuel consumption for the proposed Project construction activities would be 32,278 gallons of diesel fuel, 9,694 gallons of gasoline, and 8,071.070 kilowatt-hours of electricity. It is assumed that diesel would be used by all construction vehicles and equipment and that gasoline and electricity would be used during workers' commute.

Because construction activities are short-term, the increase in consumption within the proposed Project area will also be short-term. The use of construction best management practices will minimize energy consumption from construction activities.

The proposed Project would not increase vehicle capacity on SR 12. Therefore, it would have no impact on climate change or long-term energy use. Since the proposed Project will restore the integrity of the roadway by grinding and overlaying, it will lead to reduced maintenance activities indirectly leading to reduced maintenance energy consumption. During construction, Project Features AQ-1: Vehicle and Equipment Maintenance and

AQ-3: Recycling would be implemented for energy efficiency of construction equipment. There would be no impact.

3.1.7 Geology and Soils

Would the proposed Project:

Question	CEQA Determination
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No Impact
ii) Strong seismic ground shaking?	No Impact
iii) Seismic-related ground failure, including liquefaction?	No Impact
iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant Impact
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
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
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

a(i) No Impact

According to mapping provided by the California Department of Conservation (2025b), SR 12 does not intersect any fault lines within the proposed Project limits. Therefore, the proposed Project would have no impact.

a(ii) No Impact

Caltrans is not proposing any new structures within the Project limits, and the Project components consist of repaving the highway surface, shoulder widening, replacing guardrail, and rehabilitating and extending culverts. During an earthquake, there is a potential for ground shaking to affect the proposed Project area. However, the proposed Project would not directly or indirectly cause potential substantial adverse impacts to the public's risk for loss, injury, or death from seismic events. There would be no impact.

a(iii) No Impact

According to the earthquake and seismic hazard maps provided by the California Department of Conservation (2025c) California Geological Survey, the proposed Project is not located in an area that is susceptible to liquefaction. The proposed Project would not increase the risk of loss, injury, or death due to liquefaction, so there would be no impact.

a(iv) No Impact

According to the earthquake and seismic hazard maps through the California Department of Conservation (2025c) California Geological Survey, the proposed Project is not located in an area that is susceptible to landslides. The proposed Project would not increase the risk of loss, injury, or death due to landslides, so there would be no impact.

b) Less than Significant Impact

The proposed Project will disturb more than an acre of soil due to shoulder widening. Therefore, a Stormwater Pollution Prevention Plan (SWPPP) will be implemented. The proposed Project will also generate new impervious surface greater than 10,000 square feet, so treatment best management practices (TBMPs) will be implemented. Vegetation clearing associated with culvert upgrades and extensions may also lead to erosion.

The following Project Features would be implemented:

- PF-WQ-3: Temporary Soil Stabilization Control and Wind Erosion Control
- PF-WQ-4: Temporary Sediment Control

The proposed Project would have a less than significant impact on soil erosion and topsoil.

c) No Impact

The proposed Project is not located in a geologic unit or soil that is unstable or that would become unstable because of the proposed Project. Additionally, the proposed Project would not increase the risk of on- or off-site landslides, lateral spreading, subsidence, liquification, or collapse. There would be no impact.

d), e), and f) No Impact

The proposed Project is not located on expansive soil (as defined in Table 18-1-B of the Uniform Building Code [1994]), and there are no septic tanks, alternative wastewater

disposal systems, or any other solid waste disposal facilities planned as part of the proposed Project. Additionally, the proposed Project is not located in an area that contains a geologic unit that is paleontologically sensitive, and Caltrans does not anticipate the discovery or destruction of any unique paleontological resources during construction. There would be no impact.

3.1.8 Greenhouse Gas Emissions

Would the proposed Project:

Question	CEQA Determination
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No Impact

A construction GHG emissions analysis memorandum (Caltrans 2025e) was completed for the proposed Project. This section summarizes the findings of this review.

Construction-generated GHG includes emissions resulting from material processing by onsite construction equipment, workers commuting to and from the proposed Project site, and traffic delays due to construction. The emissions will be produced at different rates throughout the proposed Project depending on the activities involved at various phases of construction. The analysis was focused on vehicle-emitted GHG. Carbon dioxide (CO_2) is the single most important GHG pollutant due to its abundance when compared with other vehicle-emitted GHG, including methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbon (HFCs) and black carbon (BC).

Based on proposed Project information available for environmental studies, the construction-related GHG emissions were calculated using the Construction Emissions Tool 2021 (CAL-CET 2021), version 1.0.3, developed by the California Department of Transportation. It was estimated that for construction of the proposed Project, the total amount of CO_2 produced due to construction would be 460 tons.

a) Less than Significant Impact

The proposed Project's temporary construction activities would result in GHG emissions (Table 3-5).

The following Project Features would be implemented:

- PF-AQ-1: Vehicle and Equipment Maintenance
- PF-AQ-2: Idling
- PF-AQ-3: Recycling
- PF-AQ-4: Solar-Powered Boards

While the proposed Project would result in GHG emissions during construction, no change in roadway capacity as a result of the Project would occur. Construction emissions would be short-term and temporary. Therefore, the proposed Project is not

expected to result in an increase in operational GHG emissions. There would be a less than significant impact as a result of the construction generated GHG emissions.

Table 3-5: Summary of Construction-related GHG Emissions

Greenhouse Gas Parameter	Project Total Emissions
Carbon dioxide (CO_2)	460 tons
Methane (CH_4)	0.011 tons
Nitrous oxide (N_2O)	0.024 tons
Hydrofluorocarbons (HFC)	0.011 tons
Carbon dioxide equivalent (CO_2e)	473 metric tons

b) No Impact

The proposed Project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The proposed Project would not increase the capacity of the highway and therefore would not contribute to a long-term increase in GHG emissions. There would be no impact.

3.1.9 Hazards and Hazardous Materials

Would the proposed Project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less Than Significant Impact
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
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
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 proposed Project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant Impact

a) and b) Less than Significant Impact

The proposed Project has little to no potential to encounter aerially deposited lead (ADL) during construction activities. Based on past soil testing data from the proposed Project area, it is expected that the soil will contain less metal than the accepted regulated amounts. There is low potential to encounter asbestos during construction activities. Additionally, the proposed Project has a small amount of disturbed soil and no structural excavation of the roadway or bridges. Culverts and soil in areas with shoulder widening will be tested and appropriate hazardous waste specifications will be determined during the next proposed Project phase.

The following Project Features would be implemented:

- PF-HAZ-1: Hazardous Waste Management

To help reduce exposure to hazardous waste materials, Caltrans Standard Specifications would be implemented to prevent spills or leaks from construction equipment and from storage of fuels, lubricants, and solvents. Additionally, all aspects of the proposed Project associated with removal, storage, transportation, and disposal

of hazardous material would be conducted in accordance with the appropriate California Health and Safety Codes.

The proposed Project would have a less than significant impact.

c) No Impact

The proposed Project is not within one-quarter mile of any existing or proposed schools; therefore, there is no impact.

d) No Impact

Caltrans reviewed the California Department of Toxic Substances Control's Envirostor map which shows all active hazardous waste cleanup sites within the state of California (California Department of Toxic Substances Control, 2025). Review indicated that there are no active clean-up sites with the proposed Project limits. Therefore, there would be no impact.

e) No Impact

There are no airports or airstrips in the proposed Project vicinity. There would be no impact.

f) Less Than Significant Impact

During construction, Caltrans would be using one-way traffic control during nighttime on weekdays as well as limited daytime hours during weekends. All emergency services within the area would be alerted to any closures and would be accommodated through the work area when necessary. Caltrans would coordinate with local officials to ensure that SR 12 remains open to emergency traffic. Emergency vehicles may experience slight delays during times when there is one-way traffic control. AMM-TMP-1, which outlines the development of a Traffic Management Plan, would be implemented to reduce traffic impacts. There would be a less than significant impact.

g) Less Than Significant Impact

The proposed Project is not located within or adjacent to a state responsibility area (SRA) that is classified as a very high severity hazard for wildfires based on the 2023 CAL Fire SRA mapping. Caltrans proposes to build culverts and guardrail made of concrete and metal and would therefore have limited susceptibility to fires. If a wildfire were to occur, all emergency services or evacuations would be accommodated through the work area as necessary. During one-way traffic control, vehicles may experience slight delays. Caltrans would coordinate with local officials to ensure that SR 12 remains

open to emergency traffic (AMM-TMP-1 and PF-WF-1). Therefore, there would be a less than significant impact.

Avoidance and Minimization Measures

AMM-TMP-1: Traffic Management. A Traffic Management Plan (TMP) would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate routes. Strategies to manage single-lane closures including the use of flaggers and phasing, portable changeable message signs, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents, emergency response vehicles, and highway users. The TMP would also provide access for police and emergency service providers. All emergency services within the area would be alerted to any expected closures during construction. Lane closures would be planned in coordination with Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

3.1.10 Hydrology and Water Quality

Would the proposed Project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	No Impact
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
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No Impact
(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
(iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

A Water Quality Study (Caltrans 2025f) was completed for the proposed Project in addition to a Hydraulics Recommendation and Cost Estimate Memorandum (Caltrans 2025g). This section summarizes the findings of these reviews.

The proposed Project lies within the jurisdiction of San Francisco Bay (Region 2) and Central Valley (Region 5); thus, the RWQCBs and SWRCB are responsible for enforcement of State and Federal Water Quality Regulations for the proposed Project site. The portion of the proposed Project located in Region 2 is also in a municipal separate storm sewer system (MS4) area, and the portion in Region 5 is not within an MS4 area.

The proposed Project lies within two watersheds (Table 3-6). The receiving water bodies are Denverton Slough, Montezuma Slough, Grizzly Bay, Honker Bay, Suisun Bay, and Sacramento-San Joaquin Delta. Suisun Bay is listed on the 303(d) list of impaired water bodies. Denverton Slough is 1.22 miles west of the proposed Project location. Denverton Slough flows to Nurse Slough and Montezuma Slough, Grizzly Bay and Honker Bay, eventually flowing into Suisun Bay. The Sacramento River is 5.82

miles east of the proposed Project location. The Sacramento River flows into Honker Bay, eventually flowing into Suisun Bay.

Table 3-6: Watersheds and Sub-watersheds in Project Area

Watershed	Subwatershed(s)
Wooden Valley Creek-Frontal Suisun Bay Estuaries	Lucol Hollow-Frontal Suisun Bay Estuaries
Cache Slough	Watson Hollow & Lindsay Slough

a) Less Than Significant Impact

The proposed Project is not anticipated to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The scope of work for the proposed Project is expected to have a total disturbed soil area (DSA) of 10.73 acres. Soil disturbance is a temporary impact of construction activities, and Project Features WQ-3 and WQ-4 would be implemented to stabilize disturbed soil. In the case of unanticipated waste or vehicle discharges, Project Features WQ-2 & WQ 5 would be enforced to prevent runoff into the watershed. Therefore, there would be a less than significant impact.

b) No Impact

The proposed Project would not involve dewatering. There would be no impact on groundwater or the groundwater recharge rate.

c) (i), (ii), (iii), and (iv) No Impact

The proposed Project would not substantially alter the existing drainage pattern of the proposed Project site. Any erosion or siltation from the disturbed soil would be managed by a SWPPP. The proposed Project would also reestablish drainage elements such as HMA dikes to ensure that the highway drainage system is directing flows into the appropriate drainage system inlets The proposed Project would create 1.05 acres of new impervious surface (NIS). The increased runoff resulting from NIS would be captured and treated by biofiltration strips. These features would filter harmful materials contained in stormwater while allowing water to pass through, thus improving overall water quality from runoff generated within the proposed Project area. Additionally, the proposed Project would not impede or redirect flood flows. There would be no impact.

d) No Impact

The proposed Project limits are within the 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA) in one small area near the intersection of SR

12 (PM 19.07) with SR 113 (PM 0.0), according to the agency's Floor Insurance Rates Map number 06095C. There is a miniscule chance that during construction, contractor equipment could release relatively small amounts of pollutants if the work area was suddenly inundated during a flood. Additionally, the proposed Project would not impact natural and beneficial floodplain values or support incompatible floodplain development. Finally, the proposed Project is not in a tsunami or seiche zone. There would be no impact.

e) No Impact

This proposed Project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. There would be no impact.

3.1.11 Land Use and Planning

Would the proposed Project:

Question	CEQA Determination
a) Physically divide an established community?	No Impact
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

SR 12 principally serves as an east–west state highway connecting the Napa and Sonoma valleys to the Sacramento–San Joaquin Delta, carrying a mix of local, agricultural, commuter, and through traffic across the region. In Solano County, the proposed Project traverses a mix of urban industrial, urban residential, urban commercial, and agricultural land uses.

a) No Impact

The proposed Project location does not have any potential to physically divide an established community. The highway would remain open throughout construction with either two-way traffic or one-way reversing traffic control. There would be no impact.

b) No Impact

The proposed Project would comply with Solano County land use, transportation, and circulation goals. The proposed Project would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Land use plans, policies and regulations that are applicable to the proposed Project are included within the Solano County General Plan (Solano County 2025), City of Suisun City 2035 General Plan (City of Suisun City, 2015) and the SR 12 Corridor System Management Plan (STA 2010).

The Solano County General Plan balances agricultural uses with housing, infrastructure, services, and other growth, especially in unincorporated areas. It includes provisions for protecting sensitive ecological resources, such as Suisun Marsh. The plan encourages growth in cities and aims to protect agricultural and natural resources.

The City of Suisun City 2035 General Plan focuses on promoting development to support job creation, residential areas, tourism, and the nearby Travis Airforce Base. Specifically, it encourages traffic that takes advantage of SR 12. Suisun City does not currently intersect the proposed Project area. In October 2025, a formal application was

submitted by California Forever for the Suisun Expansion Project, which proposes to annex 22,873 acres of unincorporated land adjacent to SR 12 from its intersection with Denverton Road to Azevedo Road (PM 12.50-22.68) to expand Suisun City. This would grow the city from about 4 square miles to nearly 30 square miles. The plan includes creating a new community with homes, businesses, parks, and public facilities. It also proposes to create a northern bypass for SR 12 to divert traffic from the main route. The Suisun Expansion Project has not yet received full approval and is currently under environmental review.

The SR 12 Corridor System Management Plan provides a corridor-wide vision and strategic framework for managing and improving the SR 12 corridor across Napa and Solano Counties. The CSMP emphasizes multimodal functionality, coordination among jurisdictions, and performance-based decision making. It aims to balance mobility, safety, and efficiency along SR 12 by integrating land use, access management, transit, and corridor operations. The plan also identifies priorities for infrastructure improvements, preservation of corridor capacity, and system management strategies to accommodate growth while maintaining service reliability.

Caltrans examined the potential for the proposed Project to involve coordination with the Bay Conservation and Development Commission (BCDC) and found that the Project is located just outside of BCDC's Suisun Marsh jurisdiction.

The proposed Project would comply with Solano County land use, transportation, and circulation goals. The proposed Project would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, there would be no impact.

3.1.12 Mineral Resources

Would the proposed Project result in:

Question	CEQA Determination
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
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 underlying geology of the proposed Project area is mostly Montezuma Formation (poorly consolidated, clayey sand) and small amounts of older alluvium (California Department of Conservation 2025d). There are no active mines within or adjacent to the proposed Project area.

Mineral resources mined or produced in Solano County include mercury, sand and gravel, clay, stone products, calcium, and sulfur (Solano County 2008). The western portion of the proposed Project near Travis Airforce Base (AFB) falls within Mineral Resource Zones described in the California Surface Mining and Reclamation Act mineral land classification reports for Special Report 156 (California Department of Conservation 2022). Specifically, it falls within Mineral Resource Zone 3 which contains known inferred concrete aggregate resources of undetermined mineral resource significance. The rest of the proposed Project does not lie within a known mineral resource zone.

a) and b) No Impact

The proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state or a locally important mineral resource recovery site. Therefore, there would be no impact.

3.1.13 Noise

Would the proposed Project result in:

Question	CEQA Determination
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
b) Generation of excessive groundborne vibration or groundborne noise levels?	No Impact
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 proposed Project expose people residing or working in the project area to excessive noise levels?	Less Than Significant Impact

The proposed Project does not qualify as either a Type I or Type II Project under 23 Code of Federal Regulations (CFR) 772. Therefore, noise abatement does not need to be considered, and a noise study report is not required.

a) No Impact

There are no sensitive receptors in the proposed Project vicinity. The proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. There would be no impact.

b) No Impact

There would be no generation of excessive groundborne vibration or groundborne noise levels. There would be no impact.

c) Less than Significant Impact

The proposed Project is located approximately 3.5 air miles from Travis AFB. The western part of the proposed Project is within the Travis AFB Air Installation Compatible Use Zone. Noise levels associated with the use of construction equipment with occasional air traffic going to and from Travis AFB and vehicle traffic along SR 12 would be considered excessive at times. There are no people residing within the area subject to these noise levels, and construction workers would use earplugs or other sound-dampening devices in accordance with Occupational Safety and Health Administration guidelines. There would be a less than significant impact.

3.1.14 Population and Housing

Would the proposed Project Result in:

Question	CEQA Determination
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
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

Caltrans completed a Community Impact Assessment Checklist (Caltrans 2025h) to identify any impacts to the local community, including growth and displacement. The findings of the assessment are summarized as they apply to CEQA in this section.

a) and b) No Impact

The proposed Project would not induce population because it would not increase the capacity of SR 12, remove barriers to future growth, or increase population or housing growth (or demand for new housing, utilities, or public services). The proposed Project would not induce substantial population growth, displace housing, or displace people; therefore, there would be no impact.

3.1.15 Public Services

Would the proposed 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 following public services:

Question	CEQA Determination
a) Fire protection?	No Impact
b) Police protection?	No Impact
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	No Impact

a) No Impact

The proposed Project would not result in the substantial alteration of government facilities in the Project area, such as fire and police protection, schools, parks or other public facilities, nor trigger the need for new government facilities or alter the demand for public services. There would be no impact.

3.1.16 Recreation

Would the proposed Project Result in:

Question	CEQA Determination
a) Would the proposed 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
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

a) No Impact

This proposed Project would not directly or indirectly increase the use of existing recreational facilities such that substantial deterioration of the facilities would occur as a result of the proposed Project. There would be no impact.

b) No Impact

This proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, there would be no impact.

3.1.17 Transportation

Would the proposed Project result in:

Question	CEQA Determination
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No Impact
b) Would the proposed Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No Impact
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
d) Result in inadequate emergency access?	Less Than Significant Impact

SR 12 is an east-west route that connects Napa, Solano, Sacramento, San Joaquin and Calaveras counties and is used for local and interregional travel. Within Caltrans District 4, the corridor begins at the intersection of SR 29 and SR 12 at James Canyon in Napa County and ends at the Rio Vista Bridge at the Solano/Sacramento County line. The corridor is approximately 30 miles long, intersecting SR 29, I-80, SR 113, SR 84, and SR 160, and is considered a major route for the eastern part of the state to access Napa and Sonoma counties. SR 12 connects the Bay Area and Central Valley and allows for the movement of a significant amount of goods while providing access to the Delta.

The proposed Project extends from 0.6 miles west of Denverton Overhead to Currie Road from PM 14.10 to 20.68 in Solano County. Within the proposed Project limits, SR 12 is a conventional highway with two lanes of travel, one in each direction. There are no high occupancy vehicle lanes along the route and no pedestrian facilities within the proposed Project limits. Bicyclists are permitted on SR 12 and can ride on the shoulders. Existing shoulders are 8 feet wide within the proposed Project area except between PM 17.0 and 17.4, where they are 4 feet wide.

Local transportation planning in Solano County includes the Solano Transportation Authority (STA), which administers the Comprehensive Transportation Plan (SCT 2020) and the Connected Mobility Implementation Plan (STA 2022). Additionally, the Solano County General Plan (Solano County 2008) contains sections pertaining to transit planning that outlines goals focusing on accessibility, sustainability, improving circulation for the agricultural community, and reducing automobile dependence.

The Metropolitan Transportation Commission (MTC), which functions as both the state-designated Regional Transportation Planning Agency and federally designated Metropolitan Planning Organization (MPO), is responsible for regional transportation

planning. MTC's Plan Bay Area 2050, serves as the San Francisco Bay Area's Regional Transportation Plan and Sustainable Communities Strategy (ABAG and MTC 2021).

a) No Impact

The proposed Project would not conflict with policies, goals, or objectives regarding the circulation system, public transit, bicycle, or pedestrian facilities. Based on the Caltrans District 4 Bike Plan (2019) only one low-tier need was identified for SR 12 within the proposed Project limits. The proposed Project would replace the existing shoulder rumble strips with the edgeline rumble strips to give more ridable width to cyclists on the shoulder, which would be an improvement to the existing bicycle facilities. Additionally, spot widening of shoulders at the Olsen Road intersection (PM 17.0 to PM 17.4) will provide more rideable width. The Caltrans District 4 Pedestrian Plan (2021) did not identify any freeway crossings or sidewalks on SR 12 within the proposed Project limits.

As discussed in AMM-TMP-1, a Traffic Management Plan would be developed to minimize potential impacts from construction to all users. The TMP would include elements, such as haul routes, flaggers, and phasing, to reduce impacts on local residents and emergency and medical service providers. The TMP would also ensure access to businesses in the local area is maintained. Therefore, there would be no permanent impact to components of the transportation system.

There would be no impact.

b) No Impact

The proposed Project is consistent with CEQA Guidelines section 15064.3, subdivision (b) which relates to induced demand and vehicle miles traveled (VMT). There would be no impact.

c) No Impact

The proposed Project would install safety enhancements including the installation of guardrails and barriers that meet current safety standards. Therefore, the proposed Project would not substantially increase hazards due to a geometric design feature or incompatible uses as a result of the Project and would serve to bring this route up to current engineering standards for safety. There would be no impact.

d) Less Than Significant Impact

Medical and emergency vehicles would be able to continue to use routes in the local area to serve fire, medical, and law enforcement purposes. During one-way traffic control, flaggers would give priority to emergency vehicles.

The following AMMs would be implemented:

- AMM-TMP-1: Traffic Management Plan

The proposed Project would have a less than significant impact.

Avoidance and Minimization Measures

AMM-TMP-1: Traffic Management. A Traffic Management Plan (TMP) would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate routes. Strategies to manage single-lane closures including the use of flaggers and phasing, portable changeable message signs, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents, emergency response vehicles, and highway users. The TMP would also provide access for police and emergency service providers. All emergency services within the area would be alerted to any expected closures during construction. Lane closures would be planned in coordination with Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

3.1.18 Tribal Cultural Resources

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

Question	CEQA Determination
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
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

Caltrans contacted the Native American Heritage Commission (NAHC) on April 8, 2025, with a request for a Sacred Lands File (SLF) search regarding the proposed Project in the region. The NAHC responded with negative SLF search results on April 10, 2025, along with a list of representatives from Native American Tribes that may have specific interest in the region. Per CEQA Public Resource Code section 21084.3 (a), 21084.3 (c) 21080.3.1 (c), 21080.3.1 (d) (i.e., AB 52) and the National Historic Preservation Act (NHPA) Section 106 36 CFR § 800.2(c)(2)(ii) letters regarding the proposed Project were sent via email to all individuals on the NAHC contact list on May 15, 2025. The list of contacted representatives includes:

- Ronald Kirk, Chairperson, Grindstone Rancheria of Wintun-Wailaki
- Wayne Mitchum Jr., Chairperson, Cachil Dehe Band of Wintun Indians of Colusa Indian Community
- Anthony Roberts, Chairperson, Yocha Dehe Wintun Nation
- Bunny Tarin, Tribal Administrator, Guidiville Rancheria of California
- Charlie Wright, Chairperson, Cortina Rancheria-Kletsel Dehe Band of Wintun Indians

a) and b) No Impact

No tribal cultural resources were reported in record searches or in consultation with Native groups and individuals. Furthermore, the implementation of Project Features PF-CULT-1 and PF-CULT-2 and AMM-TCR-1 would help avoid impacting tribal resources. There would be no impact on tribal cultural resources.

Avoidance and Minimization Measures

AMM-TCR-1: Cultural Sensitivity Training. Prior to the initiation of construction for the proposed Project, the Project contractor, staff, and construction crews shall be made aware of the potential to encounter cultural resources and Tribal Cultural Resources (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants) through a presentation provided by an archaeologist and a representative from the Yocha Dehe Wintun Nation.

3.1.19 Utilities and Service Systems

Would the proposed Project:

Question	CEQA Determination
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
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
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
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

a), b), c), d), and e) No Impact

No new water supplies would be required as part of the proposed Project. Solid waste would not be generated in excess of State or local standards or capacity of local infrastructure. If solid waste is generated, Caltrans would comply with all federal, state, and local management and reduction statutes and regulations related to solid waste disposal. No utility relocations are expected; however, if any unanticipated utilities are discovered, there would be brief shutoffs while they are relocated. Any shutoffs would be temporary and communicated to impacted businesses and residents to limit inconvenience. There would be no impact.

3.1.20 Wildfire

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

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact
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
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
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

a), b), c), and d) No Impact

The proposed Project is not located within or adjacent to a state responsibility area (SRA) that is classified as a very high risk for wildfires based on 2025 CAL Fire SRA mapping. Project Feature PF-WF-1 would be implemented to prevent fires. Therefore, there would be no impact.

3.1.21 Mandatory Findings of Significance

Question	CEQA Determination
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
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Less Than Significant Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less Than Significant Impact

a) Less than significant with Mitigation Incorporated

The proposed Project does not 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.

There would be temporary and permanent construction related impacts to Biological resources as a result of the proposed Project. However, with the implementation of Project Features and AMMs outlined in Appendix B as well as mitigation measures, biological impacts would be reduced to less than significant.

b) Less than significant

REGULATORY SETTING

Under CEQA (Guidelines Section 15355), “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the proposed Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Cumulative impacts to resources in the proposed Project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through things like displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the proposed Project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts.

The cumulative impacts analysis follows the Caltrans six-step process established in the May 2025 interim guidance on cumulative impact analysis under CEQA (Caltrans 2025i), as follows:

1. Determine which environmental resources to include in the cumulative impact analysis.
2. Determine the resource study area.
3. Describe the existing cumulative condition.
4. Discuss whether the project's impacts are cumulatively considerable
5. If the project's contribution is cumulatively considerable, discuss any additional proposed mitigation for Caltrans' contribution to cumulative condition.
6. State post-mitigation conclusion (if additional mitigation was added to address cumulative impacts).

1. Resource Determination

The project is anticipated to have no impacts or less than significant impacts on most of the resource areas identified in this document. Resources that the project would have no impact on, or less than significant impacts to, would not contribute to a cumulative impact and therefore do not need to be included in this analysis. The project could have impacts to Biological resources that require avoidance, minimization, and/or mitigation measures. Biological resources have been included in this analysis:

2. Resource Study Area

The resource study areas (RSA) for biological resources encompass the areas shown in Figure 3-1. They include critical habitat for the four special-status species impacted by the Project: California tiger salamander (CTS), vernal pool tadpole shrimp (VPTS),

vernal pool fairy shrimp (VPFS), and burrowing owl. RSA 1 consists of upland habitat for the burrowing owl, whereas RSA 2 consists of aquatic habitat and adjacent upland dispersal habitat for CTS, VPTS, and VPFS.

The RSA for the burrowing owl is larger than that of the three aquatic species (CTS, VPTS, and VPFS) since upland terrestrial habitat extends further than wetland habitat. The burrowing owl does not have any designated critical habitat but occurs in wide, open, sparsely vegetated areas, so the RSA for the species includes less developed agricultural areas on the peninsula until Lindsey Slough.

Critical habitat for branchiopods consists of vernal pools which extend from the south border of Travis Airforce Base to Grizzly Island Wildlife Area, intersecting SR 12 west of Denverton and east of Suisun City. CTS also uses vernal pools as breeding grounds. Critical habitat for CTS is located north of the Project area, intersecting SR 113 north of Creed to slightly north of Olcott.

The cumulative impact analysis determines whether the proposed Project, in combination with projects that are planned, approved, or under construction, would result in a cumulative effect, and, if so, whether the Project's contribution to the cumulative effect would be considerable. Past, present, and reasonably foreseeable projects within the RSAs and considered in the cumulative analysis are described below in Tables 3-7 and 3-8.

Table 3-7: Caltrans Projects Considered for Cumulative Analysis

Project Title	EA	County-Route	Post Mile	Description	Impacts	Current Status	RSA #
Sol-12 Rehab	0T10U	SOL-12	12.79/20.60	Widen and rehabilitate roadway.	Permanently converted wetlands and vernal pools. Implemented MMs.	Complete (2017)	1 & 2
Intersection improvement - roundabout-Route 12 and 113	4G560	SOL-12	19.20/19.20	Construction of a single-lane roundabout at the intersection of SR12 and SR113. Components include approach legs, splitter islands, center island, traversable apron, roadway, intersection widening, drainage system, guard rail replacement, lighting installation, construction staging, site clean-up and restoration.	ITP for CTS. Implemented MMs.	Complete (2018)	1 & 2
Pavement Rehabilitation	2Q550	SOL-12	7.9/14.10	Replace asphalt concrete surfacing and overlay, replace the temporary barriers located in the median with permanent concrete barriers type 60M, replace shoulder and centerline rumble strips, replace metal beam guardrail with Midwest guardrail system, upgrade crash cushions to current standards, upgrade drainage systems, widen shoulders, remove and replace the existing asphalt concrete dikes, provide erosion control, and upgrade railings on Union Creek Bridge.	ITP for CTS. Temporary and permanent impacts to CTS dispersal habitat and aquatic habitat. Temporary and permanent impacts to VPFS and VPTS habitat. Temporary construction impacts to burrowing owl breeding habitat. Perform on-site mitigation for CTS.	Construction	1 & 2
Emergency Roadway Storm-Related Failure Repair	3Y050	SOL-12/113	7.5-13.5; 5.0/9.0	Repair potholes, cracks, and subsiding sections of pavement. Cold-plane HMA and protect utility vault.	None	Construction	1 & 2
Replace Culverts	3Q280	SOL-12	18.10/19.60	Replace failed culverts, regrade ditches, clear debris and vegetation, and install minor erosion control to correct flooding that is affecting the highway.	None	Complete (2021)	1 & 2

Project Title	EA	County-Route	Post Mile	Description	Impacts	Current Status	RSA #
Azevedo Road Turn Pockets	2A620	SOL-12	22.70/23.70	Widen shoulders and add left turn pockets. Overlay main line with HMA. Extend/replace Well Creek Bridge and culverts. Add embankment confinement along Wall Creek.	Impacts to CTS, VPFS, and VPTS. No impact to burrowing owls.	Complete (2019)	1
State Route 12/State Route 113 Intersection Improvement Project	4G560	SOL-12/113	18.9/19.4; 0.0/0.2	Build a single lane roundabout in place of existing un-signalized intersection, install light poles, and utilize advance warning signs.	ITP for CTS. Temporary and permanent impacts to CTS. Implemented compensatory mitigation to offset impacts.	Complete (2022)	1 & 2
Solano State Route 12 Roadway Segment 1 Resurfacing and Rehabilitation	0J631	SOL-12	20.6/22.7	Replace guardrails, rehabilitate culverts, rehabilitate pavement, and install bioretention strip.	ITP for CTS. Temporary disturbance to CTS non-breeding habitat. No impact to burrowing owl.	Complete (2025)	1
Solano State Route 12 Roadway Segment 2 Rehabilitation, Realignment, and Widening	0J632	SOL-12	23.7/25.5	Change the SR 12 grade profile, widen lanes and shoulders, install new pavement, replace existing fence with new fence, install roadside signs, add a left-turn lane and widen the roadway at the Church Road intersection, install new permanent lighting at the Church Road intersection, install new guardrails where the embankment would be a 1:1 slope, install new and replace existing culverts, and install biofiltration swales.	ITP for CTS. Temporary and permanent impacts to upland CTS habitat. On-site mitigation and off-site compensatory mitigation will be implemented to offset impacts.	Project is in the Design phase of the development process.	1
Solano State Route 12 Segment 3 Roadway Resurfacing and Rehabilitation, Widening, and Sidewalk Upgrade	0J633	SOL-12	25.50/26.41	Repair and repave roadway surface, widen roadway, and improve drainage systems.	None	Project is in the Design phase of the development process.	1

Project Title	EA	County-Route	Post Mile	Description	Impacts	Current Status	RSA #
HM1 Pavement Digouts	2X710	SOL-113	0.0/18.0	Dig out asphalt and repave roadway.	None	Construction	1 & 2
Pavement Rehabilitation from Route 12 to Chestnut Street (Dixon)	0Q150	SOL-113	0.0/8.5	Reconstruct, widen, and realign roadway. Replace culverts. Widen or replace bridges.	Potential to impact VPFS, VPTS, and CTS.	Project is in the Design phase of the development process.	1 & 2

Table 3-8: Other Projects Considered for Cumulative Analysis

Project Title	Location	Description	Impacts	Current Status	RSA #
Suisun Expansion Project (California Forever)	East of Suisun City	Annex 22,873 acres of unincorporated land adjacent to SR 12 from its intersection with Denverton Road to Azevedo Road (PM 12.50-22.68) to expand Suisun City. Expand Suisun City from ~4 square miles to ~30 square miles. Create a new community with homes, businesses, parks, and public facilities.	The project footprint overlaps critical CTS, VPTS, and VPFS habitat as well as burrowing owl habitat.	Project is in the Planning Phase of the development process	1 & 2
Historic City & Downtown Waterfront	City of Rio Vista	Promote, incentivize and foster the expansion of retail, commercial and housing uses in the downtown and waterfront area.	None	Project is currently in the Planning Phase of the development process	1
Proposed 2400 Unit Residential & 30 Acres Commercial	City of Rio Vista	Construct 2400 new residential units and 30 acres of commercial space.	None	Project is currently in the Planning Phase of the development process	1
Approved 850 Unit Subdivision	City of Rio Vista	Construct 850 new homes.	The project footprint overlaps burrowing owl habitat.	Project is currently in the Design phase of the development process	1
Liberty Subdivision	City of Rio Vista	Construct 855 new housing units. Infrastructure and models have already been constructed.	The project footprint overlaps burrowing owl habitat.	Construction	1

3. Existing Cumulative Condition

Vernal Pools

Prior to large-scale farming operations in the Central Valley, vernal pool complexes existed throughout the valley and provided habitat for species including CTS, VPTS, and VPFS. Since large-scale farming operations and recent suburban development began in the Central Valley, the trend has been to remove vernal pools, and there has been subsequent loss and fragmentation of vernal pool habitat. As a result, some native species residing in vernal pools have become threatened, endangered, or candidate species. Nearly 90% of vernal pools in California's Central Valley and other regions have disappeared. Studies show that this loss has continued in recent decades, with more than 13% of the remaining vernal pool habitat in the Central Valley (137,000 acres) disappearing between the late 1970s and 2005. (CDFW, 2022). Much of the remaining habitat is fragmented. This resource is considered to be in poor health.

California Tiger Salamander

California tiger salamander (CTS) is endemic to (only occurs in) California. Historically, the species likely occurred in grasslands throughout the state. Currently, only six populations remain. CTS in Solano County are part of the Central California population segment, which is considered federally threatened. CTS requires two major habitat components: aquatic breeding sites and nearby terrestrial aestivation or refuge sites (areas where CTS are dormant during hot or dry periods) containing small mammal burrows. The aquatic breeding sites must retain water for at least 10 weeks, which is typical of vernal pools. CTS populations have declined due to factors such as habitat loss and fragmentation, invasive species, mortality from road crossings, contaminants, and small mammal burrow control (USFWS, 2017).

CTS status varies by population. In 2004, the Central Valley and Bay Area populations were listed as federally threatened, while the Sonoma County and Santa Barbara County populations were listed as federally endangered. This resource is considered to be in poor health.

Vernal Pool Branchiopods

Vernal pool fairy shrimp (VPFS) occur throughout California and Oregon. Vernal pool tadpole shrimp (VPTS) are endemic to the California Central Valley and southern Oregon. One of the primary threats to both species is habitat loss, fragmentation, and degradation due to development and agriculture (USFWS n.d. a, USFWS n.d. b). VPFS has been listed as federally threatened since 1994. There are a total of 32 populations across California and Oregon, with 10 residing in California's Central Valley. VPTS has

been listed as federally endangered since 1994. They are found in scattered populations throughout the Central Valley as well as the Agate Desert of southern Oregon. This resource is considered to be in poor health.

Western Burrowing Owl

The western burrowing owl is native to North and South America. Northern populations are migratory and fly south to overwinter. In California, western burrowing owl populations declined by 60% from the 1980s to 1990s (Center for Biological Diversity, 2024). Additionally, the number of breeding pairs has continued to decline. The species has been extirpated from 19 of the 51 counties where it historically occurred. The decline in burrowing owl populations is primarily due to habitat loss from development. The main threats to their habitat are agriculture, construction and development activities, and the loss of small mammal populations. Western burrowing owl is currently a candidate species under CESA. It is not considered federally endangered but is imperiled within California. Therefore, this resource is considered to be in poor health.

4. PROJECT IMPACTS

The Build Alternative would have cumulatively considerable temporary and permanent impacts on the habitats of special-status species. It would temporarily impact 1.101 acres of CTS upland habitat and 0.004 acres of CTS aquatic habitat and permanently impact 0.236 acres of CTS upland habitat. It would also temporarily impact 0.0002 acres of VPFS habitat and 0.004 acre of VPTS habitat and permanently impact 0.0005 acre of VPFS habitat and 0.0002 acre of VPTS habitat. The proposed Project also has moderate potential to affect the western burrowing owl through temporary disturbance of potential nesting and roosting habitat. Construction activities would require avoidance, minimization, and mitigation measures for impacts to wetlands and special-status species and their habitats.

The following Mitigation Measures are proposed to offset the proposed Project's impacts:

- MM BIO-1: Compensation to Offset Project Permanent Impacts
- MM BIO-2: Wetland Mitigation Monitoring

Without the incorporation of compensatory mitigation, the proposed Project would have resulted in temporary and permanent cumulatively considerable impacts on CTS and vernal pool branchiopods. However, with the incorporation of the Mitigation Measures, the Build Alternative's contributions would not be cumulatively considerable.

Eight of the other projects considered above occur only in RSA 1, one occurs only in RSA 2, and nine occur in both RSAs. Nine projects had/have the potential to temporarily or permanently impact CTS and its habitat. Five of these projects applied for or received an incidental take permit (ITP) for CTS since they anticipated unintentionally killing individuals or preventing their migration. The proposed Project also anticipates take of CTS, which will be covered under an ITP. While there is a cumulative impact occurring to CTS and its habitat within the RSA, the Build Alternative's contribution would be less than significant. With the incorporation of the proposed Mitigation Measures, the impacts would not be cumulatively considerable.

Three of the projects considered had or have the potential to negatively impact vernal pool branchiopods. Without compensatory mitigation incorporated, the proposed Project would have resulted in a cumulatively considerable impact on vernal pool branchiopods. However, with the incorporation of proposed Mitigation Measures the Build Alternative's contribution would not be cumulatively considerable.

Four of the projects considered had or have the potential to impact western burrowing owl habitat. Since the species is not listed as endangered, none of the projects pursued an ITP for western burrowing owl. The proposed Project would have a less than significant impact on the western burrowing owl, but it would not be cumulatively considerable. Compensatory mitigation is not required for this species.

5. MITIGATION

The Project proposes Mitigation Measures MM-BIO-1 and MM-BIO-2 for CTS and vernal pool branchiopods. No additional measures are required for cumulative impacts.

c) Less than significant

The proposed Project would not adversely affect human beings directly or indirectly. It is anticipated that Project impacts would be minor and temporary as a result of construction related activities and delays due to traffic management. Night work and one way lane closures are anticipated which would cause potential impacts to vehicles traveling through the Project vicinity. With the implementation of the AMMs these impacts would be reduced. Therefore, the proposed Project would have a less than significant impact.

Figure 3-1: Resource Study Areas

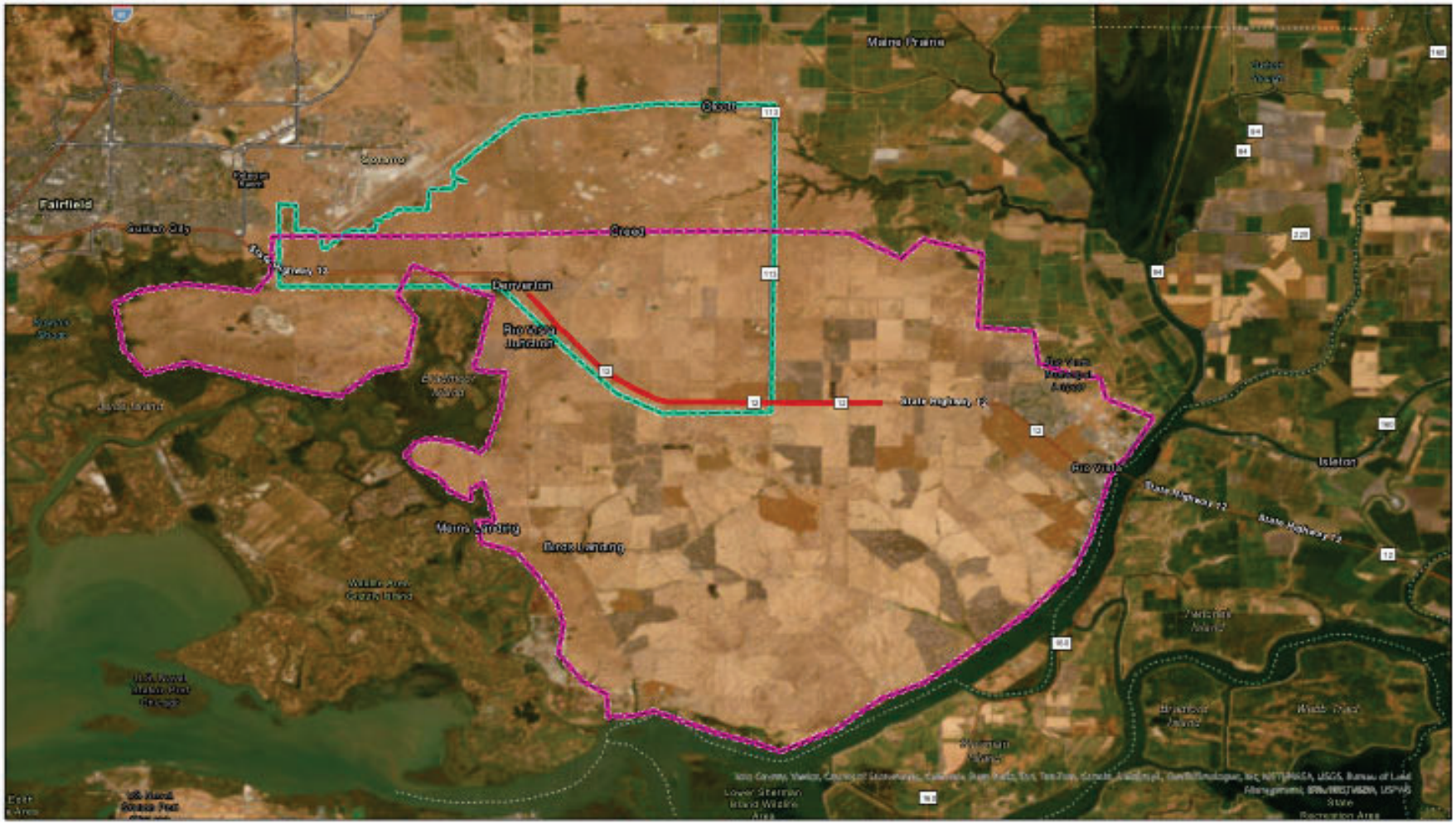


Figure 3-1. Resource Study Area (RSA) map.

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

Chapter 4 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to GHG emissions reduction and climate change research and policy. Research published by the Intergovernmental Panel on Climate Change and other scientists over recent decades has shown an accelerated rate of climatological changes over the past 150 years, attributed to GHG emissions generated from the production and use of fossil fuels.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation Project.

4.1 Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), refer to SER, Chapter 16, Climate Change.

4.2 Environmental Setting

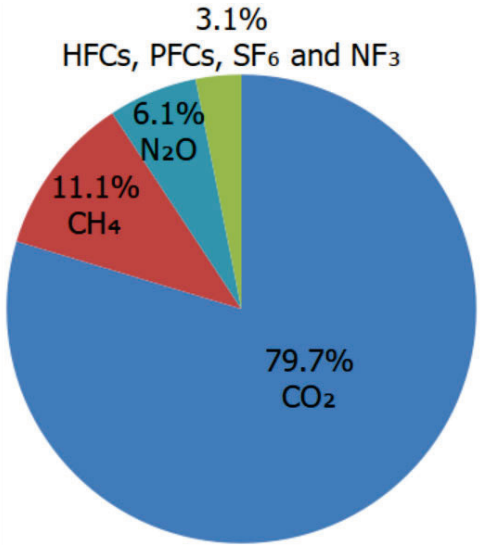
The proposed Project is in a rural area, with a primarily natural-resources based agricultural and wind energy generation economy. SR 12 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR 113, which intersects SR 12 at PM 19.17. Traffic counts on SR 12 are low. The Solano Transportation Authority (STA) guides transportation development. The "Public Health and Safety" and "Transportation and Circulation" elements of the 2008 Solano County General Plan address GHGs in the project area.

GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions

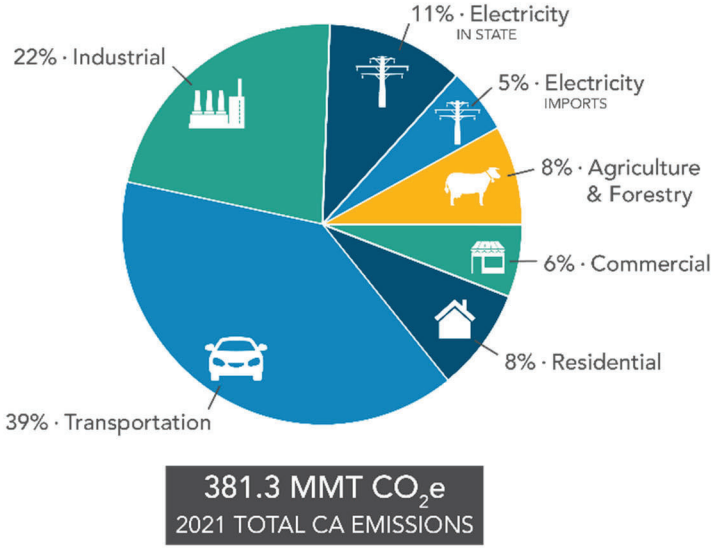
allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals.

Figure 4-1: U.S. 2024 Greenhouse Gas Emissions



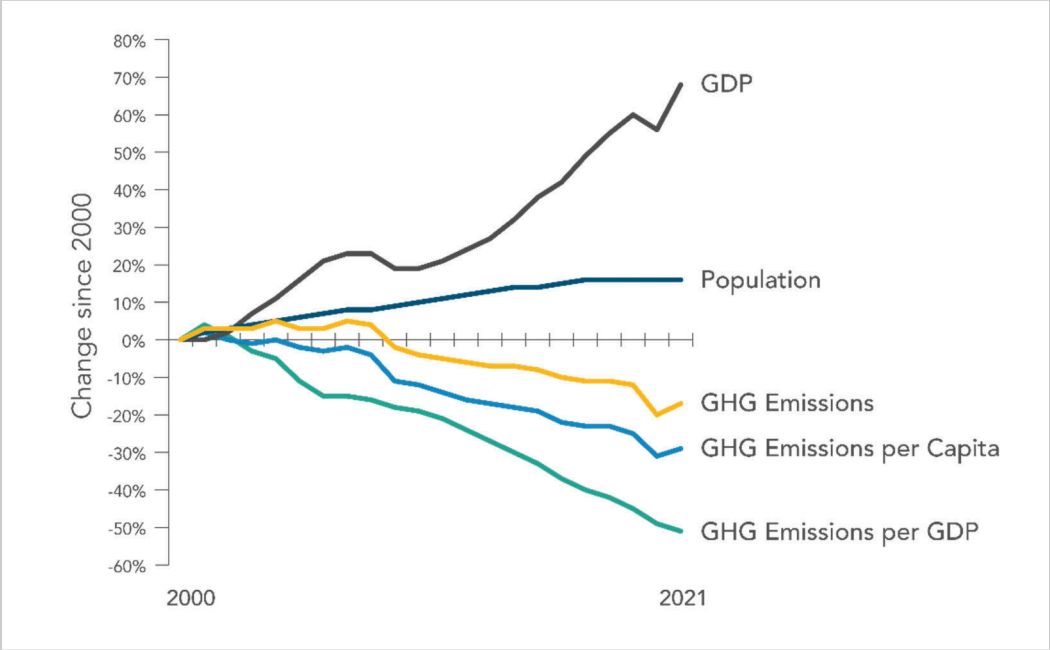
(Source: U.S. EPA 2024b)

Figure 4-2: 2023 Greenhouse Gas Emissions by Economic Sector



(Source: ARB 2023)

Figure 4-3: Change in California GDP, Population, and GHG Emissions since 2000



(Source: ARB 2023)

4.3 Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375)*, California Air Resources Board sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set as a percentage reduction in passenger vehicle GHG emissions per person, based on 2005 levels.

The proposed project is included in the RTP/SCS for the Metropolitan Transportation Commission (MTC). The regional reduction target for MTC is 15 percent by 2035 (ARB 2021). Based on the MTCs Plan Bay Area 2040 document MTC plans to reduce GHG emissions by implementing transportation demand management strategies that include creating more bicycle and pedestrian networks, targeted transportation alternatives, trip cars, car sharing, vanpool incentives, and commuter benefits ordinances. Additionally, MTC plans on implementing alternative fuel and vehicle strategies such as plug-in electric vehicle infostructure upgrades, incentives for plug-in vehicles particularly for low to moderate income households, promotion of emission reduction technology as well as marketing and education efforts.

4.4 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of methane and nitrous oxide. Additionally, the transportation sector emits a minor amount of hydrofluorocarbon emissions, which are related to refrigeration and air conditioning systems used in vehicles.

GHGs vary in their ability to trap heat in the atmosphere, a characteristic known as global warming potential. CO_2 is the most significant GHG due to its abundance and impact, and thus, the amounts of other gases are expressed relative to CO_2 using a metric called “carbon dioxide equivalent” (CO_2e). The global warming potential of CO_2 is assigned as a value of 1, and the global warming potential of other gases is assigned as multiples of CO_2. Both operational and construction emissions associated with the proposed project are analyzed in the sections below and emission values, if required, are expressed in CO_2e to provide a standardized measure of their impact.

The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512). 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, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed Project is to rehabilitate the roadway surfaces, widen shoulders, and upgrade drainage culverts. Therefore, it would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the Project would not increase the number of travel lanes on SR 12, no increase in vehicle miles traveled (VMT) would occur. While

some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will 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. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities. Table 3-6 in Chapter 3, section *3.3.8 Greenhouse Gas Emissions* summarizes estimated construction-related GHG emissions in metric tons per year.

Based on Project information available for environmental studies, the construction-related GHG emissions were calculated using CAL-CET 2021, version 1.0.3, developed by the California Department of Transportation. It was estimated that for construction of the proposed Project, the total amount of emissions produced due to construction would be 460 tons of CO_2, 0.011 tons of CH_4, 0.024 tons of N_2O, 0.011 tons of HFC, and 473 metric tons of CO_2e.

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the Project and to certify they are aware of and will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

The proposed Project’s construction activities would result in GHG emissions but would not result in long-term adverse effects. The implementation of Project Features AQ-1 to 4 would help keep GHG emissions at a minimum. The proposed Project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The proposed Project would have a less

than significant impact. Additionally, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

4.5 Greenhouse Gas Reduction Strategies

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Additionally, Caltrans has enacted policies and initiatives to reduce GHG emissions in transportation to reach the state's climate goals. For a full list of statewide and Caltrans GHG reduction strategies, refer to SER, Chapter 16, Climate Change.

Project-Level GHG Reduction Strategies

The following measures would also be implemented in the proposed Project to reduce GHG emissions and potential climate change impacts from the Project:

- PF-AQ-1: Vehicle and Equipment Maintenance
- PF-AQ-2: Idling
- PF-AQ-3: Recycling
- PF-AQ-4: Solar-Powered Boards

4.6 Adaptation

While reducing GHG emissions is crucial in combating climate change, it is only one part of the solution. Caltrans must proactively plan for the impact of climate change on California's transportation infrastructure. This involves modifying and protecting facilities to reduce potential damage and build resilience against future climate-related challenges.

Caltrans has conducted District Climate Change Vulnerability Assessments to identify segments of the State Highway System that are vulnerable to climate change impacts, such as sea level rise, increased temperatures, and extreme weather events. These assessments help prioritize areas for adaptation efforts and inform the development of strategies to enhance the resilience of critical infrastructure.

Additionally, Caltrans periodically prepares a Sustainability Roadmap, which outlines the agency's strategic plans and progress reports aimed at achieving state sustainability goals. The roadmap is a two-year progress report on several important milestones achieved by Caltrans while implementing Executive Orders B-16-12, B-18-12, and the adaptation planning process of Executive Orders B-30-15, N-19-19, and N-82-20.

Refer to SER, Chapter 16, Climate Change for additional information regarding federal, state, and Caltrans adaptation efforts.

Project Adaptation Analysis

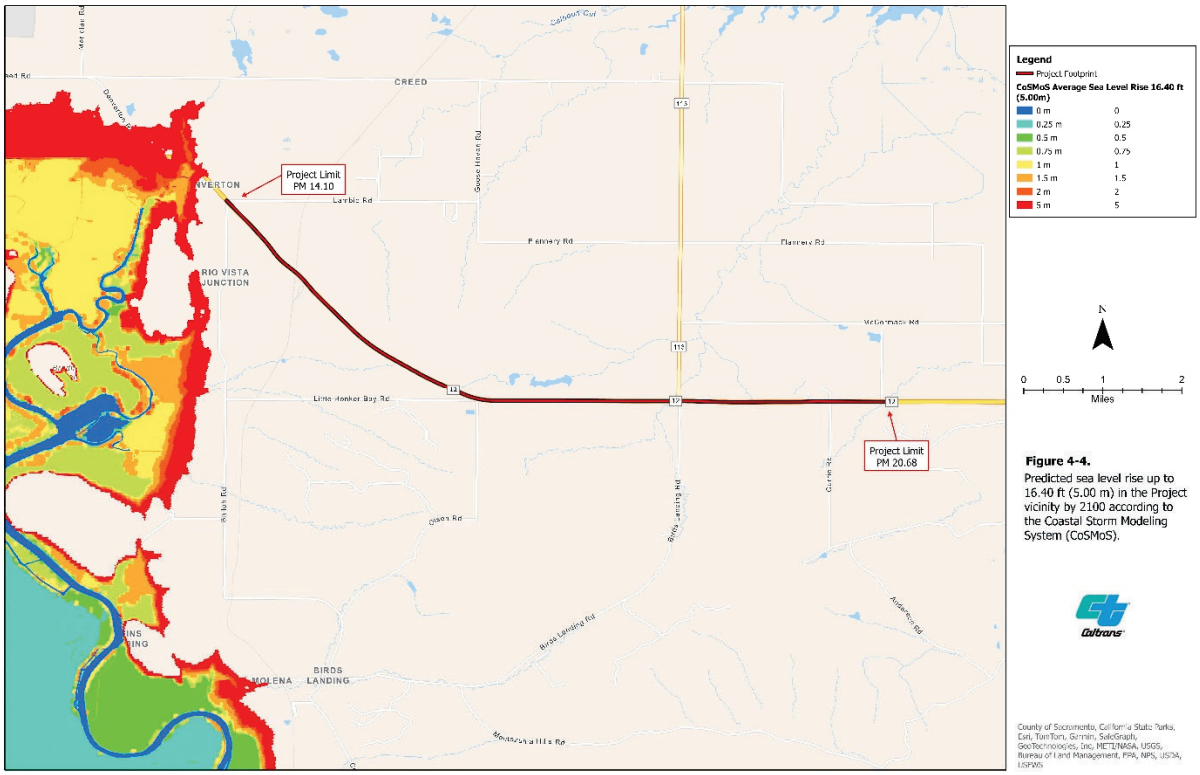
Caltrans completed a climate change vulnerability assessment in 2021 to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Sea Level Rise

The proposed 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. Figure 4.4 shows how the Project limits are outside of the sea level rise areas.

Figure 4-4: Sea Level Rise Map



Precipitation and Flooding

Although The proposed Project would increase impervious surface and extend and rehabilitate culverts, the District Climate Change Vulnerability Assessment does not indicate that the Project is in area likely to be impacted by precipitation and flooding. However, FEMA floodplain mapping shows that a small segment of SR 12 (PM 19.07) near the intersection with SR 113 is part of the 100-year floodplain.

Wildfire

The proposed Project is within a Local Responsibility Area with high risk for wildfires according to California Department of Forestry and Fire Protection (CAL FIRE) mapping (CAL FIRE 2025). The proposed Project is not within or adjacent to any SRA (CAL FIRE 2025). Caltrans proposes to build culverts made of concrete and metal, which would have a limited susceptibility to fires. Furthermore, construction activities would not increase the negative effects of wildfires. Lastly, Caltrans would work with local officials to ensure SR 12 remains open to emergency traffic.

Temperature

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the Project's design life that would require adaptive changes in pavement design or maintenance practices.

Chapter 5 List of Preparers

The primary persons responsible for contributing to, preparing, and reviewing this report are listed in Table 5-1.

Table 5-1: List of Preparers and Reviewers

Organization	Name	Role
Caltrans	Maxwell Lammert	Office Chief, Office of Environmental Analysis
Caltrans	Nina Hofmarcher	Acting Branch Chief, Office of Environmental Analysis
Caltrans	Xenia Rangaswami	Environmental Scientist, Environmental Analysis
Caltrans	Asuta Patel	Project Manager
Caltrans	Anton Kismetian	Office Chief, Design
Caltrans	Tarek Chowdury	Design Supervisor
Caltrans	Md Mostofa Haider	Design Engineer
Caltrans	Kristina Montgomery	Branch Chief, Office of Cultural Resource Studies
Caltrans	Michael Meloy	Associate Environmental Planner, Architectural History
Caltrans	Cesar Villanueva	Environmental Scientist, Archaeology
Caltrans	Lindsay Vivian	Office Chief, Office of Biological Studies and Permits
Caltrans	Sean Marquis	Branch Chief, Office of Biological Studies and Permits
Caltrans	Zaira Lopez-Navarez	Biologist
Caltrans	Ramon Lopez-Maciel	Branch Chief, Office of Hydraulics and Stormwater Design
Caltrans	Michelle Palencia	Hydraulics Specialist
Caltrans	Masis Kayaian	Hydraulics Specialist
Caltrans	Mojgan Osooli	Branch Chief, Office of Water Quality
Caltrans	Jiayi Pan	Water Quality Specialist

Table 5-1: List of Preparers and Reviewers

Organization	Name	Role
Caltrans	Shilpa Mareddy	Branch Chief, Air Quality and Noise
Caltrans	Rajvi Koradia	Air Quality and Noise Specialist
Caltrans	Alex Mcdonald	Branch Chief, Landscape Architecture
Caltrans	Gloria Ramirez	Senior Landscape Architect
Caltrans	Rudy Navarro	Landscape Associate
Caltrans	Brandon Young	Hazardous Waste Specialist
Caltrans	Matthew Farrell	Engineering Geologist

Chapter 6 Distribution List

The IS/MND was circulated on **June 5, 2026** to the following agencies and government officials:

Federal Agencies

U.S. Environmental Protection Agency, Region IX
Federal Activities Office, CMD-2 75 Hathorne Street
San Francisco, CA 94105-3901

U.S. Fish and Wildlife Service
2800 Cottage Way W-2605
Sacramento, CA 95825

U.S. Army Corps of Engineers
Sacramento District
ATTN: Regulatory Branch
1325 J Street, Room 1480
Sacramento, CA 95825

State Agencies

State Clearinghouse, Executive Officer
1400 Tenth Street, Room 156
P.O. Box 3044
Sacramento, CA 95812-3044

California Department of Fish and Wildlife
Region 3
2109 Arch Airport Rd
Stockton, CA 95206

California Air Resources Board
1001 I Street P.O. Box 2815
Sacramento, CA 95812

California State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

San Francisco Bay Conservation & Development Commission

375 Beale St
San Francisco, CA 94105

Regional and Local Agencies

Association of Bay Area Governments
375 Beale St #700
San Francisco, CA 94105

Metropolitan Transportation Commission
375 Beale St #800
San Francisco, CA 94105

Solano Transportation Authority
1 Harbor Center, Suite 130
Suisun City, CA 94585

San Francisco Bay Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

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

Federal and Statewide Elected Officials

Senator Alex Padilla
333 Bush Street, Suite 3225
San Francisco, CA 94104

Senator Adam Schiff
1Post St., Suite 2450
San Francisco, CA 94104

Congressman Mike Thompson
2721 Napa Valley Corporate Dr.
Napa, CA 94558

State Senator Chris Cabaldon
555 Mason Street
Vacaville, CA 95688

State Assemblymember Lori Wilson
One Harbor Ctr., Suite 270
Suisun City, CA 94585

COUNTY ELECTED OFFICIALS

Supervisor Mitch Mashburn
Solano County Board of Supervisors, District 5
675 Texas St., Suite 6500
Fairfield, CA 94533

CITY ELECTED OFFICIALS

Suisun City

Mayor Alma Hernandez
City Hall
701 Civic Center Blvd
Suisun City, CA 94585

Mayor Pro Tem Jennalee Dawson
City Hall
701 Civic Center Blvd
Suisun City, CA 94585

Councilmember Princess Washington
City Hall
701 Civic Center Blvd
Suisun City, CA 94585

Councilmember Parise Shepherd
City Hall
701 Civic Center Blvd
Suisun City, CA 94585

Councilmember Amit Pal
City Hall
701 Civic Center Blvd
Suisun City, CA 94585

Rio Vista

Mayor Edwin Okamura

City Hall
1 Main St
Rio Vista, CA 94571

Councilmember Sarah Donnelly
City Hall
1 Main St
Rio Vista, CA 94571

Vice Mayor Rick Dolk
City Hall
1 Main St
Rio Vista, CA 94571

Councilmember Lisa Duke
City Hall
1 Main St
Rio Vista, CA 94571

Councilmember Walt Stanish
City Hall
1 Main St
Rio Vista, CA 94571

Chapter 7 Public Circulation

The Draft Initial Study with Proposed Negative Declaration was circulated for public comment for 30 days between June 5 and July 5, 2026. Notice of availability was advertised in two newspapers, the *Daily Republic* and *Rio Vista Beacon*, on June 3 and June 17, 2026. The document was available as a hard copy at the Rio Vista Library and Suisun City Library and as a digital copy on the Caltrans environmental document website. A total of two public comments were received from the office of Assemblywoman Lori Wilson and the California Department of Fish and Wildlife (CDFW). These comments are addressed in *Appendix G*.

Appendix A Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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

September 2025

TITLE VI/NON-DISCRIMINATION POLICY STATEMENT

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds 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 non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. Caltrans will make every effort to ensure nondiscrimination in all of its services, programs, and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

Dina El-Tawansy (Sep 12, 2025 16:52:12 PDT)
DINA A. EL-TAWANSY
Director

"Improving lives and communities through transportation."

Appendix B Summary of Project Features and Avoidance and Minimization/Mitigation Measures

Project Features (PF)

PF-AES-1: Vegetation Protection. Trees and vegetation outside of the clearing and grubbing limits would be protected from the contractor's operations, equipment, and materials storage. When the pruning of trees is required to accommodate construction operations, pruning must be done under the supervision of an ISA certified arborist with standards outlined by ANSI A300 Part 1 by the Tree Care Industry Association. If removal of highway planting is necessary, replacement planting shall be provided within the proposed Project limits where safety and maintenance requirements can be met.

PF-AES-2: Erosion Control. Permanent erosion control will be provided to all disturbed soil areas, including staging areas, not receiving pavement or shoulder backing. Erosion control measures may include soil decompaction, slope rounding, slope roughening, compost amendment, incorporating materials into soil that increase vegetation suitability rolled erosion control products, fiber rolls, hydroseed, and hydromulch. In addition, existing cut slopes may also require stabilization. At these locations, erosion control should consist of 1-step hydroseeding with hydraulic biotic growth medium fiber, organic fertilizer, and mycorrhizae inoculant agronomic additives.

PF-AES-3: Construction Staging. Construction staging areas shall be located on paved areas.

PF-AES-4: Construction Waste. During construction operations, unsightly material and equipment in staging areas would be placed where they are less visible and/or covered where possible.

PF-AES-5: Aesthetic Treatments. Incorporate aesthetic treatments to visible Project features where appropriate such as color and/or texture to help reduce glare, limit visual contrast, and support visual unity and intactness along the corridor. Design rock slope protection with material of an appropriate size, scale, and color such that it reduces visual contrast.

PF-AQ-1: Vehicle and Equipment Maintenance. Regular vehicle and equipment maintenance would be enforced.

PF-AQ-2: Idling. Vehicles and equipment would have limited idling time.

PF-AQ-3: Recycling. If practicable, recycle non-hazardous waste and excess material. If recycling is not practicable, dispose of material off-site in approved disposal facilities.

PF-AQ-4: Solar-Powered Boards. Use solar-powered signal boards, if feasible.

PF-BIO-1: Wildlife Exclusion Fencing (WEF). Before starting construction, at the discretion of the Caltrans biologist, WEF will be installed along the drainage system work areas where wildlife could enter the proposed Project alignment. WEF will be removed following completion of construction activities. At the discretion of the Caltrans biologist, WEF may be removed at times when construction is no longer active in the area.

PF-BIO-2: Mark Environmentally Sensitive Areas. Before construction begins, Environmentally Sensitive Areas (ESAs) will be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking will remain in place throughout construction or until work is completed at a particular location. It may be removed during the wet season (and subsequently reinstalled) if needed to prevent materials from being washed away. The final Project plans will depict all locations where ESA markings will be installed and how they will be installed. The bid solicitation package special provisions will clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings will be maintained in good repair throughout the proposed Project as needed.

PF-BIO-3: Nesting Bird Surveys. If proposed Project activities occur from February 1 to September 30, then a pre-construction survey will be conducted for nesting birds no more than 10 calendar days before construction. If active nests are found, then an appropriate buffer will be established, and the nest will be monitored for compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503.

PF-BIO-4: Restoration of Disturbed Areas. Temporarily disturbed areas will be restored to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition.

PF-BIO-5: Prevention of Inadvertent Entrapment and Entanglement. To prevent wildlife from becoming entangled or trapped in erosion control materials, plastic monofilament

netting (i.e., erosion control matting) or similar material will not be used. Acceptable substitutes include coconut coir matting or tackifying hydroseeding compounds.

PF-BIO-6: Site Restrictions. The following site restrictions would be implemented:

- Enforcing a speed limit of 15 miles per hour in the proposed Project footprint in unpaved and paved areas to reduce dust and excessive soil disturbance.
- Locating construction access, staging, storage, and parking areas within the proposed Project ROW and outside any designated ESA. Access routes, staging and storage areas, and contractor parking would be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork would be clearly marked before initiating construction or grading.
- Certifying, to the maximum extent practicable, borrow material is non toxic and weed free.
- Picking up debris and waste daily. Disposing of all food-related trash items such as wrappers, cans, bottles, and food scraps in closed containers and to be removed at least once a day from the work area.
- Prohibiting pets from entering the proposed Project footprint during construction.
- Prohibiting firearms within the proposed Project footprint, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.
- Maintaining equipment to prevent the leakage of vehicle fluids such as gasoline, oils, or solvents and developing a Spill Response Plan. Hazardous materials such as fuels, oils, solvents, and similar would be stored in sealable containers in a designated location that is at least 50 feet from aquatic habitats.

PF-BIO-7: Invasive Species Prevention. To reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health effects. In the event that noxious weeds are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these noxious weeds and dispose of it in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance would be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the proposed Project footprint would be covered to the extent practicable with heavy black plastic solarization material until the end of the Project. If work occurs in sensitive habitat, vehicles and

equipment would be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds.

PF-CULT-1: Unidentified Resources. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find in consultation with the Tribe to determine whether or not additional study is warranted. Additional archaeological surveys will be needed if Project limits are extended beyond the present survey limits. Contact the Lead Caltrans Archaeologist in the Office of Cultural Resource Studies. If any Tribal Cultural Resources (TCR) as defined by the Tribe [Yocha Dehe Wintun Nation] and CEQA are found during construction, a Professionally Qualified Staff archaeologist shall assess the find. The Office of Cultural Resource Studies will notify local consulting Tribes if the resource is determined to be a TCR and consult with the contractor and the Tribe to determine whether the resources can be avoided by the proposed Project. If the TCR cannot be avoided, then further consultation efforts with the Tribes would be necessary to determine its treatment.

PF-CULT-2: Human Remains Discovery. If Caltrans Professionally Qualified Staff determines that cultural materials contain human remains, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains. Caltrans' Cultural Resources Studies Office will contact the County Coroner. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent. Caltrans, District 4, Cultural Resources Studies Office will work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

PF-GHG-1: Energy Reduction. Solar energy would be used to reduce the use of non-renewable energy during construction.

PF-HAZ-1: Job Site Management. The current Caltrans Standard Specifications Section 13-4, Job Site Management, would be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. All aspects of the proposed Project associated with transport, storage, use, and disposal of hazardous materials would be done in accordance with the California Health and Safety Code and the appropriate local, state, and federal hazardous waste regulations. Handling and management of hazardous materials would comply with the current Caltrans Standard Specifications Section 14-11, Hazardous

Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.

PF-WF-1: Fire Prevention. Caltrans would implement the following fire prevention practices into the proposed Project construction specifications: Internal combustion engines, stationary and mobile, would be equipped with spark arrestors. Spark arrestors would be in good working order. Contractor would keep all construction sites and staging areas free of grass, brush, and other flammable materials. Personnel would be trained in the practices of the fire safety plan relevant to their duties. Construction and maintenance personnel would be trained and equipped to extinguish small fires. Work crews would have fire-extinguishing equipment on hand, as well as emergency numbers and cell phone or other means of contacting the fire department. Smoking would be prohibited while operating equipment and would be limited to paved or graveled areas or areas cleared of all vegetation. Smoking would be prohibited within 30 feet of any combustible material storage area (including fuels, gases, and solvents). Smoking would be prohibited in any location during a Red Flag Warning issued by the National Weather Service for the proposed Project area.

PF-WQ-1: Tracking Control. This practice involves implementing a temporary entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles. This practice helps in preventing and reducing sedimentation from entering a storm drain or watercourse.

PF-WQ-2: Waste Management and Materials Pollution Control. Properly handle and store materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to nearby watercourses. Properly dispose of any vegetation/landscape waste material to minimize or eliminate the discharge of these materials into storm drain systems or nearby watercourses. Label products, implement proper cleaning techniques, and recycle materials. All hazardous materials and waste must be labeled (e.g., Diesel, gasoline, fertilizers, solvents). Store all hazardous materials and other waste in approved secondary containers protected from wind and water.

PF-WQ-3: Temporary Soil Stabilization Control and Wind Erosion Control. This practice involves the placement of geosynthetics, turf reinforcement mats, plastic covers, or rolled erosion control products (RECPs), including erosion control blankets, to stabilize disturbed soil areas and protect soils from erosion by wind or water.

PF-WQ-4: Temporary Sediment Control. Store, transport, and transfer all disturbed soil, sand, and material in conformity with the technical Caltrans Standard Specifications (2025). In addition, avoid storing excavated material where it can easily erode onto roadways, or into drainage systems and streams. Minimize transport of debris and silt

off the construction site. This may include installing fiber rolls and silt fence. Soil stockpiles must be stabilized or securely covered at the end of each day. When needed, street sweeping shall be conducted to remove sediment from roadways and to prevent sediment from entering storm drains or receiving waters.

PF-WQ-5: Job Site Management: This practice implements effective handling, storage, usage, and disposal practices to control material pollution and manage waste at the job site before they enter storm drain systems and receiving waters. This practice also recommends street sweeping to minimize or eliminate the discharge of waste material to receiving waters.

PF-WQ-6: Best Management Practices (BMP). In accordance with State Water Resources Control Board requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be developed and erosion control BMPs implemented to minimize wind- or water-related erosion. The Caltrans Construction Site BMP Manual provides guidance for the inclusion of provisions in all construction contracts to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges. At a minimum, protective measures would include the following:

- Prohibiting discharge of pollutants from vehicle and equipment cleaning into storm drains or watercourses.
- Servicing vehicles and construction equipment including fueling, cleaning, and maintenance at least 50 feet from aquatic habitat unless separated by topographic or drainage barrier. If this is not possible, fueling would be conducted as stated in Caltrans' statewide Construction General Permit and Caltrans Construction Site BMP Manual.
- Fueling must be performed on level-grade areas. On-site fueling would only be used when and where it is impractical to send vehicles and equipment off-site for fueling. When fueling must occur on-site, the contractor would designate an area to be used subject to the approval of the Resident Engineer representing Caltrans. Drip pans or absorbent pads would be used during on-site vehicle and equipment fueling.
- Collecting and disposing of concrete wastes and water from curing operations in appropriate washouts, located at least 50 feet from watercourses.
- Maintaining spill containment kits onsite at all times during construction operations and/or staging or fueling of equipment.
- Using water trucks and dust palliatives to control dust in unvegetated areas and covering of temporary stockpiles when weather conditions require.
- Protecting graded and designated staging areas from erosion using an appropriate combination of approved erosion control items or methods, in accordance with the SWPPP, as indicated in the State Water Resources

Control Board permit, and as stated in the contract plans and special provisions.

- Establishing permanent erosion control measures such as bio-filtration strips and swales to receive stormwater discharges from the highway or other impervious surfaces to the maximum extent practicable.
- Installing coir rolls or straw wattles per guidance in the Caltrans BMP Guidance Handbook during construction to capture sediment.
- Protecting graded and designated staging areas consistent with the State Water Resources Control Board Construction General Permit and the Caltrans BMP Guidance Handbook.

Avoidance and Minimization Measures (AMMs)

AMM-BIO-1: Pre-construction Surveys. An approved biologist will conduct pre-construction surveys for special-status species as needed. A visual encounter survey will be conducted immediately before ground disturbing activities. Suitable habitat within the proposed Project alignment will be visually inspected.

AMM-BIO-2: Special-Status Species. If special-status species are encountered in the proposed Project alignment, work within 50 feet of the animal will cease immediately, and the Resident Engineer and approved biologist will be notified. Based on the professional judgment of the biologist, if proposed Project activities can be conducted without harming or injuring the animal, it may be left at the location of discovery and monitored by the biological monitor. Project personnel will be notified of the finding, and at no time will work occur within 50 feet of the animal without a biological monitor present.

AMM-BIO-3: Biological Monitoring. An approved biologist will be present during construction activities where take of a listed species could occur. Through communication with the Resident Engineer or designee, the approved biologist may stop work if deemed necessary for any reason to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed.

AMM-BIO-4: Worker Environmental Awareness Program. Prior to the start of construction, a biologist will provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later will receive the same training before beginning work. Upon completion of the education program, employees will sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the proposed Project, ESAs within the proposed Project site, and notes key avoidance measures, as well as

employee guidance will be given to each person who completes the training program. These forms will be made available to the resource agencies upon request.

AMM-BIO-5: Nest Discovery. If an active burrow is identified during pre-construction surveys, Caltrans will implement an avoidance-first strategy consistent with the CDFW's March 7, 2012 Staff Report on Burrowing Owl Mitigation (Staff Report). Per the Staff Report, Caltrans' strategy would include measures such as avoiding impacts to burrows, establishing a buffer around burrows, and visual screens. If Caltrans finds that an avoidance-first strategy is not possible, such that burrowing owl take as defined by California Fish and Game Code Section 86 is unavoidable, Caltrans would establish a buffer around the burrow and request an Incidental Take Permit from CDFW.

AMM-BIO-6: Night Lighting. During nighttime work for project construction, night lighting shall be used only in the area actively being worked on and shall be focused on the direct area of work. Lighting fixtures should incorporate fully shielded (full-cutoff) or zero uplight to reduce light spill and glare into natural habitat. Lighting will be limited to the minimum illumination necessary to maintain safe working conditions and will be directed toward the active construction area and away from natural areas. Caltrans will coordinate further with CDFW on construction lighting during the Design phase and permitting.

AMM-BIO-7: Temporary Covered Species Barrier. Prior to construction a wildlife exclusion fence plan shall be provided to CDFW for review and written approval. Upon approval, exclusion fencing shall be installed prior to the start of groundbreaking work to prevent California tiger salamander from dispersing into the Project Area. Exclusion fencing shall be designed to allow California tiger salamander to leave the Project Area using a one-way funnel or other method approved by CDFW. Exclusion fencing shall remain in place during groundbreaking construction work and shall be removed within 30 days after completion of this work.

A qualified biologist or other trained staff shall inspect exclusion fencing daily throughout all phases of the project. After each exclusion fence check, a qualified biologist or other trained staff shall prepare an exclusion fence inspection report documenting type and location of any damage to the temporary barrier. Any exclusion fence damage shall be repaired within 48 hours. As part of the wildlife exclusion fence plan, refuge opportunities, such as coverboards or straw wattles shall be provided at regular intervals along both sides of the exclusion fence

AMM-BIO-8: Inspection of Pipes and Culverts. Inspection of Pipes and Culverts. All construction pipes, hoses, or similar structures that could inadvertently trap wildlife (including any hollow openings of battery storage containers) stored in the Project Area for one or more overnight periods shall be either securely covered prior to storage or

thoroughly inspected by a qualified biologist and/or Biological Monitor for California tiger salamander or other animals before the pipe is subsequently buried, capped, or otherwise used or moved in any way.

AMM-BIO-9: Open Trenches and Keyways Inspection. To prevent inadvertent entrapment of the California tiger salamander during construction, a qualified biologist shall check all excavated open holes, sumps, trenches, caps in culvert connections, and keyways for California tiger salamander at the start of each day for trapped animals. A qualified biologist shall ensure all excavated, steep-walled holes or trenches more than 6 inches deep are provided with one or more escape ramps. Before filling trenches or holes, a qualified biologist shall thoroughly inspect them for trapped California tiger salamander. If a California tiger salamander is discovered by a qualified biologist or anyone else, work shall stop and CDFW shall be contacted immediately.

AMM-BIO-10: Swainson's Hawk Assessment and Avoidance. If Project Activities are to be conducted between March 15 and September 15, the Permittee shall ensure a qualified biologist conducts focused surveys for Swainson's hawk. The following criteria for surveys shall be met:

- Surveys shall be conducted within 1/4 mile of the Project Site
- Surveys shall be conducted in proposed work areas, staging, and storage areas.

Nest surveys for Swainson's hawks shall be conducted in a manner consistent with the recommended timing and methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. For more information, see https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds.

If an active nest is identified, a 1/4 mile no-work buffer shall be maintained around the nest until the young fledge. If any active Swainson's hawk nests are found within a certain distance of the Project Site, as determined during permitting, CDFW shall immediately be contacted, and all work shall halt.

AMM-BIO-11: Western Burrowing Owl Pre-Construction Surveys. An agency-approved biologist(s) would conduct pre-construction surveys for western burrowing owls prior to the breeding season (February 1 through August 31). The biologist shall inspect all burrows with typical characteristics of rodent and/or fossorial burrowing activity such as owl pellets, feathers, freshly turned dirt, animal tracks, fur, or white markings and provide the results to CDFW prior to the initiation of construction. Caltrans shall follow the pre-construction survey monitoring schedule and requirements noted in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW Staff Report). For more information see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline.

If it is evident that the burrows are active within the buffers described in the CDFW Staff Report, Caltrans shall notify CDFW and fully avoid species by clearly delineating an Environmental Sensitive Area (ESA) and no-disturbance around all burrowing owl burrows within the proposed Project area. A current map of burrowing owl nesting and/or wintering locations on and near the project shall be kept on site at all times. Caltrans shall remove and properly dispose of all materials used for delineation immediately upon completion of the proposed Project.

AMM-TCR-1: Cultural Sensitivity Training. Prior to the initiation of construction for the proposed Project, the Project contractor, staff, and construction crews shall be made aware of the potential to encounter cultural resources and Tribal Cultural Resources (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants) through a presentation provided by an archaeologist and a representative from the Yocha Dehe Wintun Nation.

AMM-TMP-1: Traffic Management. A Traffic Management Plan (TMP) would be developed by Caltrans during the design phase. The TMP would include public information, motorist information, incident management, construction, and alternate routes. Strategies to manage single-lane closures including the use of flaggers and phasing, portable changeable message signs, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would be incorporated into the TMP to minimize delays to local residents, emergency response vehicles, and highway users. The TMP would also provide access for police and emergency service providers. All emergency services within the area would be alerted to any expected closures during construction. Lane closures would be planned in coordination with Caltrans and Solano County and would include notices to emergency services providers, and the public in advance.

Mitigation Measures (MMs)

MM-BIO-1: Compensation to Offset Project Permanent Impacts. To prevent significant impacts from the proposed Project, Caltrans will implement a compensation package based on the estimated impacts on protected natural resources, including wetlands, other waters, and suitable habitat in the range of the listed species. Compensation will be determined in coordination with the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW) during the design phase. At a minimum, the compensation will be a 1:1 ratio, with ratios determined during Consultation and permit processes. Caltrans will follow an approach of prioritizing (1) bank credits, (2) in-lieu fee program credits, then (3) permittee-responsible mitigation. Bank credits are currently available, and are

expected to be available, to use for impacts to wetlands, CTS, and vernal pool branchiopods. Caltrans expects to purchase bank credits as compensatory mitigation for impacts to wetlands, CTS, and vernal pool branchiopods. In case bank credits are not available at the time for wetland impacts, in-lieu fee program credits are expected to be available. In case all credit options are unavailable for any of these biological resources, on-site or off-site permittee-responsible mitigation would be pursued, such as habitat restoration or preservation.

MM-BIO-2: Wetland Mitigation Monitoring. After construction, Caltrans would restore temporarily disturbed wetland habitats and monitor onsite vegetation at these locations as well as any locations where additional wetland enhancement or restoration is implemented as compensatory mitigation. Reports to environmental regulatory agencies on the status of monitoring following Project completion would be submitted as determined in Project permits and authorizations. The Caltrans mitigation requirement would be considered satisfied once the target acreage of wetland habitat to be restored is successful, as determined and approved by the regulatory agencies requiring compensatory mitigation.

Appendix C List of Abbreviations

AB52	Assembly Bill 52
AC	Asphalt Concrete
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
AFB	Airforce Base
AMM	Avoidance and Minimization Measure
APL	Alternative Pipe Lining
ARB	Air Resources Board
BC	Black Carbon
BCDC	Bay Conservation and Development Commission
BIOSTP	Biofiltration Strip
BMP	Best Management Practice
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CAL-CET 2021	California Emissions Tool 2021
CAPM	Capital Preventative Maintenance
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act

CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH_4	Methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	Carbon Dioxide
CRHR	California Register of Historical Resources
CRLF	California Red-legged Frog
CSP	Corrugated Steel Pipe
CTS	California Tiger Salamander
DI	Drainage Inlet
DSA	Disturbed Soil Area
EA	Expenditure Authorization
EB	Eastbound
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Act
FES	Flared End Section
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
GPI	Geosynthetic Paving Interlayer
HFC	Hydrofluorocarbon

HMA	Hot Mix Asphalt
HMA-A	Hot Mix Asphalt Type A
IPaC	Information for Planning and Consultation
IS/MND	Initial Study with Mitigated Negative Declaration
ITP	Incidental Take Permit
MBGR	Metal Beam Guardrail
MBTA	Migratory Bird Treaty Act
MGS	Midwest Guardrail System
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
MS4	Municipal separate storm sewer system
N_2O	Nitrous Oxide
NES	Natural Environment Study
NIS	New Impervious Surface
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NWPT	Northwestern Pond Turtle
OSD	Overside Drain
PM	Postmile
PRC	Public Resources Code

Programmatic Agreement	*First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding compliance with Section 106 of the NHPA, as it pertains to the Administration of the Federal Aid Highway Program in California*
Project	Solano County State Route 12 Pavement Preservation Project
RHMA	Rubberized Hot Mix Asphalt
RHMA-G	Rubberized Hot Mix Asphalt Type G
ROW	Right of Way
RSA	Resource Study Area
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SAMI-F	Stress Absorbing Membrane Interlayer-Fabric
SGD	Stormwater Guard Drain
SHOPP	State Highway Operation and Protection Program
SHS	State Highway System
SLF	Sacred Lands File
sqft	Square Feet
SR	State Route
SRA	State Responsibility Area
SSC	California Species of Special Concern
STA	Solano Transportation Authority
SWHA	Swainson's Hawk

SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TBMP	Treatment Best Management Practice
TMP	Traffic Management Plan
USFWS	United States Fish and Wildlife Service
VMT	Vehicle Miles Traveled
VPFS	Vernal Pool Fairy Shrimp
VPTS	Vernal Pool Tadpole Shrimp
WB	Westbound

Appendix D List of Technical Studies and References

Association of Bay Area Governments (ABAG) and Metropolitan Planning Commission (MTC). 2021. *Plan Bay Area 2050.* https://planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf?cb=d25378a9. Accessed: December 10, 2025.

Bulger, J. B., Scott, N. J. Jr., & Seymour, R. B. (2003). *Terrestrial activity and conservation of adult California red-legged frogs* Rana aurora draytonii *in coastal forests and grasslands*. Biological Conservation, 110(1), 85–95. https://doi.org/10.1016/S0006-3207(02)00179-9.

California Air Resources Board (ARB). 2008. *Climate Change Scoping Plan Appendices. Volume II: Analysis and Documentation*. Appendix I, p. I-19. December. https://ww3.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2021. *SB 375 Regional Plan Climate Targets*. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2022a. *2022 Scoping Plan for Achieving Carbon Neutrality*. Executive Summary. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2022b. *Climate Change*. https://ww2.arb.ca.gov/our-work/topics/climate-change. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2023. *California Greenhouse Gas Emissions Inventory Data–2023 Edition, 2000-2021*. https://ww2.arb.ca.gov/ghg-inventory-data. Accessed: June 14, 2024.

California Department of Conservation. 2025a. *California Geological Survey*. https://www.conservation.ca.gov/cgs. Accessed: December 10, 2025.

California Department of Conservation. 2022. *SMARA Mineral Land Classification*. https://www.conservation.ca.gov/cgs/minerals/mineral-land-classification-smara. Accessed: December 10, 2025.

California Department of Conservation. 2025a. *Farmland Mapping & Monitoring Program.* https://www.conservation.ca.gov/dlrp/fmmp. Accessed: December 10, 2025.

California Department of Conservation. 2025b. *Mines Online*. https://maps.conservation.ca.gov/mol/index.html. Accessed: December 10, 2025.

California Department of Conservation. 2025c. *DOC Maps: Geologic Hazards*. https://maps.conservation.ca.gov/geologichazards/. Accessed: December 10, 2025.

California Department of Conservation. 2025d. *California Regional Geologic Maps*. https://www.conservation.ca.gov/cgs/rgm/maps. Accessed: December 10, 2025.

California Department of Fish and Wildlife (CDFW). 2022. *California's Vernal Pools*. https://wildlife.ca.gov/Conservation/Plants/Vernal-Pools. Accessed: December 10, 2025.

California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database. RareFind Version 5.0. Biogeographic Data Branch. Sacramento, California. Accessed December 10, 2025.

California Department of Forestry and Fire Protection (CAL FIRE). 2025. *Fire Hazard Severity Map*. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed: December 10, 2025.

California Department of Toxic Substances Control. 2025. *EnviroStor*. https://www.envirostor.dtsc.ca.gov/public/. Accessed: December 10, 2025.

California Department of Transportation (Caltrans). 2019. *Caltrans Climate Change Vulnerability Assessments*. District 1 Technical Report. December. Prepared by WSP. https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/air-quality-conformity-and-resiliency-planning/2019-climate-change-vulnerability-assessments. Accessed: December 10, 2025.

California Department of Transportation (Caltrans). 2020. *Caltrans Greenhouse Gas Emissions and Mitigation Report*. Final. August. Prepared by ICF, Sacramento, CA. https://dot.ca.gov/programs/public-affairs/mile-marker/summer-2021/ghg. Accessed: June 14, 2024.

California Department of Transportation (Caltrans). 2025a. *Visual Impact Assessment Questionnaire*. Central Region Office of Landscape Architecture. Fresno, CA.

California Department of Transportation (Caltrans). 2025b. *Natural Environment Study*. District 4 Office of Biological Sciences and Permits. Oakland, CA.

California Department of Transportation (Caltrans). 2025c. California Department of Transportation (Caltrans). 2025c. *Section 106 Screening Memo for the State Route 12 Pavement Preservation Project at Postmile 14.1 to Postmile 20.68 on State Route 12 in Solano County*. District 4 Office of Cultural Resource Studies.

California Department of Transportation (Caltrans). 2025d. *Energy Analysis Report*. District 4 Office of Environmental Engineering. Oakland, CA.

California Department of Transportation (Caltrans). 2025e. *Construction Greenhouse Gas Emissions Analysis*. District 4 Office of Environmental Engineering. Oakland, CA.

California Department of Transportation (Caltrans). 2025e. *Construction Greenhouse Gas Emissions Analysis*. District 4 Office of Environmental Engineering. Oakland, CA.

California Department of Transportation (Caltrans). 2025f. *Water Quality Study*. District 4 Office of Water Quality.

California Department of Transportation (Caltrans). 2025g. *Hydraulics Recommendation and Cost Estimate Memorandum*. Central Region Office of Hydraulics and Stormwater Design. Fresno, CA.

California Department of Transportation (Caltrans). 2025h*. Community Impact Memo for SR-12 / Pavement Restoration.* District 4 Office of Environmental Analysis. Oakland, CA.

California Department of Transportation (Caltrans). 2025i. *Change to Effect Analysis under National Environmental Policy Act and Instructions on Cumulative Impact Analysis under California Environmental Quality Act: Interim Guidance*. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/change-to-effect-analysis-under-nepa-a11y.pdf. Accessed: December 10, 2025.

California Governor's Office of Planning and Research (OPR). 2015. *A Strategy for California @ 50 Million.* November. https://opr.ca.gov/planning/environmental-goals/. Accessed: June 14, 2024.

California Natural Resources Agency. 2022. *Nature-Based Climate Solutions: Natural and Working Lands Climate Smart Strategy*.

https://resources.ca.gov/Initiatives/Expanding-Nature-Based-Solutions. Accessed: June 14, 2024.

California Natural Resources Agency. 2023. *California Climate Adaptation Strategy*. https://climateresilience.ca.gov/overview/index.html. Accessed: June 14, 2024.

California Ocean Protection Council. 2024. State Agency Sea-Level Rise Action Plan for California. February. https://opc.ca.gov/sea-level-rise/. Accessed: June 14, 2024.

California Ocean Protection Council. 2024. State of California Sea Level Rise Guidance: 2024 Science and Policy Update. https://opc.ca.gov/2024/06/for-immediate-release-ocean-protection-council-adopts-updated-guidance-to-help-california-prepare-for-and-adapt-to-rising-seas/. Accessed: June 14, 2024.

Center for Biological Diversity. 2024. *State Protections Sought for Vanishing California Burrowing Owls*. https://biologicaldiversity.org/w/news/press-releases/state-protections-sought-for-vanishing-california-burrowing-owls-2024-03-05

City of Suisun City. 2015. *2035 General Plan*. https://www.suisun.com/files/sharedassets/suisuncity/v/1/departments/development-services/documents/gp-vol_1_ch1-3.pdf. Accessed: December 10, 2025.

Climate-Safe Infrastructure Working Group. 2018. *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. September. https://resources.ca.gov/CNRALegacyFiles/docs/climate/ab2800/AB2800_Climate-SafeInfrastructure_FinalNoAppendices.pdf. Accessed: June 14, 2024.

Coulombe, H. N. (1971*). Behavior and Population Ecology of the Burrowing Owl,* Speotyto cunicularia, *in the Imperial Valley of California*. The Condor, Summer (Vol. 73, Issue 2). https://www.jstor.org/stable/pdf/1365837.pdf. Accessed: December 10, 2025.

England, A. S., Bechard, M. J., & Houston, C. S. (1997). *Swainson's Hawk* (Buteo swainsoni). In A. Poole (Ed.), Birds of North America, (No. 265). Philadelphia: Academy of Natural Sciences of Philadelphia; Washington, DC: American Ornithologists' Union.

Federal Highway Administration (FHWA). 2022. *Sustainability*. https://www.fhwa.dot.gov/environment/sustainability/resilience/. Last updated July 29, 2022. Accessed: June 14, 2024.

Jennings, M. R., & Hayes, M. P. 1994. *Amphibian and Reptile Species of Concern in California*. California Department of Fish and Game. Inland Fisheries Division.

Loredo, I., Van Vuren, D., & Morrison, M. L. 1996. *Habitat Use and Migration Behavior of the California Tiger Salamander*. Journal of Herpetology, 30(2), 282–285.

National Oceanic and Atmospheric Administration (NOAA). 2022. *2022 Sea Level Rise Technical Report*. https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html. Accessed: June 14, 2024.

Nowak, R. M. 1999. *Walker's Mammals of the World* (6th ed.). Baltimore, MD: Johns Hopkins University Press.

Poulin, R. G., Todd, L. D., Haug, E. A., Millsap, B. A., & Martell, M. S. 2020. *Burrowing Owl* (Athene cunicularia). In A. F. Poole (Ed.), Birds of the World. Cornell Lab of Ornithology. https://doi.org/10.2173/bow.burowl.01. Accessed: December 10, 2025.

Rosier, J. R., Ronan, N. A., & Rosenberg, D. K. 2006. *Post-Breeding Dispersal of Burrowing Owls in an Extensive California Grassland*. In The American Midland Naturalist (Vol. 155, Issue 1).

Solano County. 2008. *2008 Solano County General Plan*. https://www.solanocounty.gov/government/resource-management/planning-services/2008-solano-county-general-plan. Accessed: December 10, 2025.

Solano Transportation Authority (STA). 2010. *State Route 12 Corridor System Management Plan*. https://sta.ca.gov/wp-content/uploads/2019/05/SR-12_CSMP_Fulldocument.pdf. Accessed: December 10, 2025.

Solano Transportation Authority (STA). 2020. *Solano County Comprehensive Transportation Plan 2040*. https://sta.ca.gov/documents_and_report/solano-comprehensive-transportation-plan-ctp/. Accessed: December 10,2025.

Solano Transportation Authority (STA). 2022. *STA Connected Mobility Implementation Plan Solano County Market Assessment – DRAFT*. https://sta.ca.gov/wp-content/uploads/2022/01/07.Aa_STA-Market-Assessment_Draft_v6.pdf. Accessed: December 10, 2025.

Solano County Water Agency. n.d. *Solano County Multispecies Habitat Conservation Plan.* https://scwa2.com/solano-multispecies-habitat-conservation-plan/. Accessed: December 10, 2025.

State of California. 2018. *California's Fourth Climate Change Assessment.* http://www.climateassessment.ca.gov/. Accessed: June 14, 2024.

Stebbins, R. R. 2003. *A Field Guide to Western Reptiles and Amphibians (3rd ed.)*. Houghton Mifflin Company.

U.S. Department of Transportation (U.S. DOT). 2014. *Corporate Average Fuel Economy (CAFE) Standards*. https://www.transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards. Accessed: June 14, 2024.

U.S. Department of Transportation (U.S. DOT). 2023. *Climate Action*. January. https://www.transportation.gov/priorities/climate-and-sustainability/climate-action. Accessed: June 14, 2024.

U.S. Environmental Protection Agency. 2024a. *Data Highlights*. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: June 14, 2024.

U.S. Environmental Protection Agency. 2024b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022*. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: June 14, 2024.

U.S. Fish and Wildlife Service. 1993. *1-Year Petition Finding on the Western Pond Turtle.* Federal Register, *58*(155), 42717.

U.S. Fish & Wildlife Service. 2006. *Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Red-Legged Frog (Rana aurora draytonii), and Special-Rule Exemption for Existing Routine Ranching Activities; Final Rule*. Federal Register, *71*(71), 19244–19346.

U.S. Fish & Wildlife Service. 2010. *Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the California Red-Legged Frog (Rana draytonii); Final Rule*. Federal Register, 75(52), 12816–12847.

U.S. Fish and Wildlife Service (USFWS). 2017. *Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*)*. https://www.biologicaldiversity.org/species/amphibians/California_tiger_salamander/pdfs/Central_CTS_Recovery_Plan.pdf. Accessed: December 10, 2025.

U.S. Fish & Wildlife Service. 2019. *Species Status Assessment for the Tricolored Blackbird (Agelaius tricolor), Version 1.1*. Region 8 – Sacramento, California.

U.S. Fish and Wildlife Service (USFWS). No date a. *Vernal Pool Fairy Shrimp*. https://www.fws.gov/species/vernal-pool-fairy-shrimp-branchinecta-lynchi. Accessed: December 10, 2025.

U.S. Fish and Wildlife Service (USFWS). No date b. *Vernal Pool Tadpole Shrimp*. https://www.fws.gov/species/vernal-pool-tadpole-shrimp-lepidurus-packardi. Accessed: December 10, 2025.

U.S. Global Change Research Program. 2023. *Fifth National Climate Assessment*. https://nca2023.globalchange.gov/chapter/front-matter/. Accessed: June 14, 2024.

Verts, B. J., & Carraway, L. N. 1998. *Land Mammals of Oregon* (No. 46). Corvallis: Oregon State University Press.

Zeiner, D.C., W.F. Laudenslayer, Jr., and K.E. Mayer. 1990. *California's Wildlife. Volume I: Amphibians and Reptiles*. California Department of Fish and Game, Sacramento, CA.

Appendix E Species Lists

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

Query Criteria: Quad IS (Denverton (3812128) OR Birds Landing (3812127))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	SSC
Actinemys marmorata northwestern pond turtle	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G3T3	S3	WL
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Asio flammeus short-eared owl	ABNSB13040	None	None	G5	S2	SSC
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	GNRT2	S2	1B.2
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Branchinecta conservatio Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
Centromadia parryi ssp. parryi pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2
Charadrius montanus mountain plover	ABNNB03100	None	None	G3	S2	SSC
Chloropyron molle ssp. hispidum hispid salty bird's-beak	PDSCR0J0D1	None	None	G2T1	S1	1B.1

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Chloropyron molle ssp. molle soft salty bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1	1B.2
Cicuta maculata var. bolanderi Bolander's water-hemlock	PDAPI0M051	None	None	G5T4T5	S2?	2B.1
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cirsium hydrophilum var. hydrophilum Suisun thistle	PDAST2E1G1	Endangered	None	G2T1	S1	1B.1
Coastal Brackish Marsh Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Elaphrus viridis Delta green ground beetle	IICOL36010	Threatened	None	G1	S1	
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Isocoma arguta Carquinez goldenbush	PDAST57050	None	None	G1	S1	1B.1
Lasiurus frantzii western red bat	AMACC05080	None	None	G4	S3	SSC
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S3	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030	None	Rare	G2	S2	1B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Melospiza melodia maxillaris Suisun song sparrow	ABPBXA301K	None	None	G5T3	S2	SSC
Microseris paludosa marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
Navarretia leucocephala ssp. bakeri Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
Plagiobothrys hystriculus bearded popcornflower	PDBOR0V0H0	None	None	G2	S2	1B.1
Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020	None	None	G3	S3	SSC
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G2	S2	1B.2
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S2	FP
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S3	FP
Sidalcea keckii Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
Sorex ornatus sinuosus Suisun shrew	AMABA01103	None	None	G5T1T2Q	S1S2	SSC
Spirinchus thaleichthys pop. 2 longfin smelt - San Francisco Bay-Delta DPS	AFCHB03040	Endangered	Threatened	G5TNRQ	S1	
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	

Record Count: 58

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United States Department of the Interior

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

In Reply Refer To: 09/02/2025 17:15:44 UTC
Project Code: 2025-0052585
Project Name: 0AA53 State Route 12 Roadway Capital Preventative Maintenance Project

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

To Whom It May Concern:

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

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2025-0052585

Project Name: 0AA53 State Route 12 Roadway Capital Preventative Maintenance Project

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The SR-12 Capital Preventive Maintenance (CAPM) project (EA 0AA53) in Solano County proposes to grind and resurface the mainlines and shoulders from 0.6 mile west of Denverton Overhead to Currier Road (PM 14.1–20.68). Work includes dig-outs, cold planing, asphalt concrete overlay, AC dikes, replacement of centerline and edgeline rumble strips, and shoulder widening to a standard 8 feet between PM 17.0–17.4. The project will also upgrade guardrails with concrete vegetation control, replace and adjust inlets, upgrade signing and pavement delineation, and replace existing channelizers in kind. Hydraulic improvements include culvert replacements, flared-end section upgrades, and rock slope protection at select outlets. All work will occur within Caltrans right of way, with no bridge work proposed, and construction is anticipated to be conducted primarily at night under standard lane closure requirements

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.19520675,-121.86408619398293,14z



Counties: Solano County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 17 threatened, endangered, or candidate species on this species list.

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

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

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

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

Project code: 2025-0052585 09/02/2025 17:15:44 UTC

MAMMALS

NAME	STATUS
Salt Marsh Harvest Mouse *Reithrodontomys raviventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

BIRDS

NAME	STATUS
California Least Tern *Sternula antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
California Ridgway's Rail *Rallus obsoletus obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened
Western Spadefoot *Spea hammondii* Population: Northern DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

INSECTS

NAME	STATUS
Delta Green Ground Beetle *Elaphrus viridis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2319	Threatened

Project code: 2025-0052585 09/02/2025 17:15:44 UTC

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

FLOWERING PLANTS

NAME	STATUS
Contra Costa Goldfields *Lasthenia conjugens* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered
Keck's Checker-mallow *Sidalcea keckii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5704	Endangered
Soft Bird's-beak *Cordylanthus mollis ssp. mollis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8541	Endangered
Suisun Thistle *Cirsium hydrophilum var. hydrophilum* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2369	Endangered

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

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CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

29 matches found. Click on scientific name for details

Search Criteria: , Quad is one of [3812127:3812128]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	Yes	1994-01-01	No Photo Available
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	Yes	1988-01-01	 © 1994 Robert E. Preston, Ph.D.
Atriplex coronata var. *coronata*	crownscale	Chenopodiaceae	annual herb	Mar-Oct	None	None	G4T3	S3	4.2	Yes	1994-01-01	 © 1994 Robert E. Preston, Ph.D.
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2009 Zoya Akulova
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2	Yes	2004-01-01	 © 2016 John Doyen

Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	Yes	2007-05-22	 © 2019 John Doyen
Chloropyron molle ssp. *hispidum*	hispid salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	None	None	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available
Chloropyron molle ssp. *molle*	soft salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	FE	CR	G2T1	S1	1B.2	Yes	1974-01-01	 © 2014 John Doyen
Cicuta maculata var. *bolanderi*	Bolander's water-hemlock	Apiaceae	perennial herb	Jul-Sep	None	None	G5T4T5	S2?	2B.1		1974-01-01	 © 2007 Doreen L Smith
Cirsium hydrophilum var. *hydrophilum*	Suisun thistle	Asteraceae	perennial herb	Jun-Sep	FE	None	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	 © 2013 Aaron Arthur
Eleocharis parvula	small spikerush	Cyperaceae	perennial herb	(Apr)Jun-Aug(Sep)	None	None	G5	S3	4.3		1980-01-01	 ©2018 Ron Vanderhoff
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	Yes	1988-01-01	No Photo Available
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2004 Carol W. Witham

Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2017 John Doyen
Isocoma arguta	Carquinez goldenbush	Asteraceae	perennial shrub	Aug-Dec	None	None	G1	S1	1B.1	Yes	1994-01-01	No Photo Available
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1	Yes	1974-01-01	 © 2013 Neal Kramer
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01	 © 2013 Keir Morse
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	None	None	G5T2	S2	1B.2	Yes	1974-01-01	 © 2003 Mark Fogiel
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Yes	1974-01-01	 ©2000 John Game
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	Yes	1994-01-01	 © 2015 Aaron Schusteff
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
Microseris paludosa	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
Myosurus minimus ssp. *apus*	little mousetail	Ranunculaceae	annual herb	Mar-Jun	None	None	G5T2Q	S2	3.1		1980-01-01	No Photo Available

Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1	Yes	1994-01-01	 © 2018 Barry Rice
Plagiobothrys hystriculus	bearded popcornflower	Boraginaceae	annual herb	Apr-May	None	None	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15	 © 2017 Chris Winchell
Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	FE	None	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available

Showing 1 to 29 of 29 entries

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Suggested Citation:
California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 2 September 2025].
}

Appendix F Project Footprint Map



Figure F-1. Project Footprint.

Map 1 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California



Figure F-1. Project Footprint.

Map 2 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California



Figure F-1. Project Footprint.

Map 3 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California



Figure F-1. Project Footprint.

Map 4 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

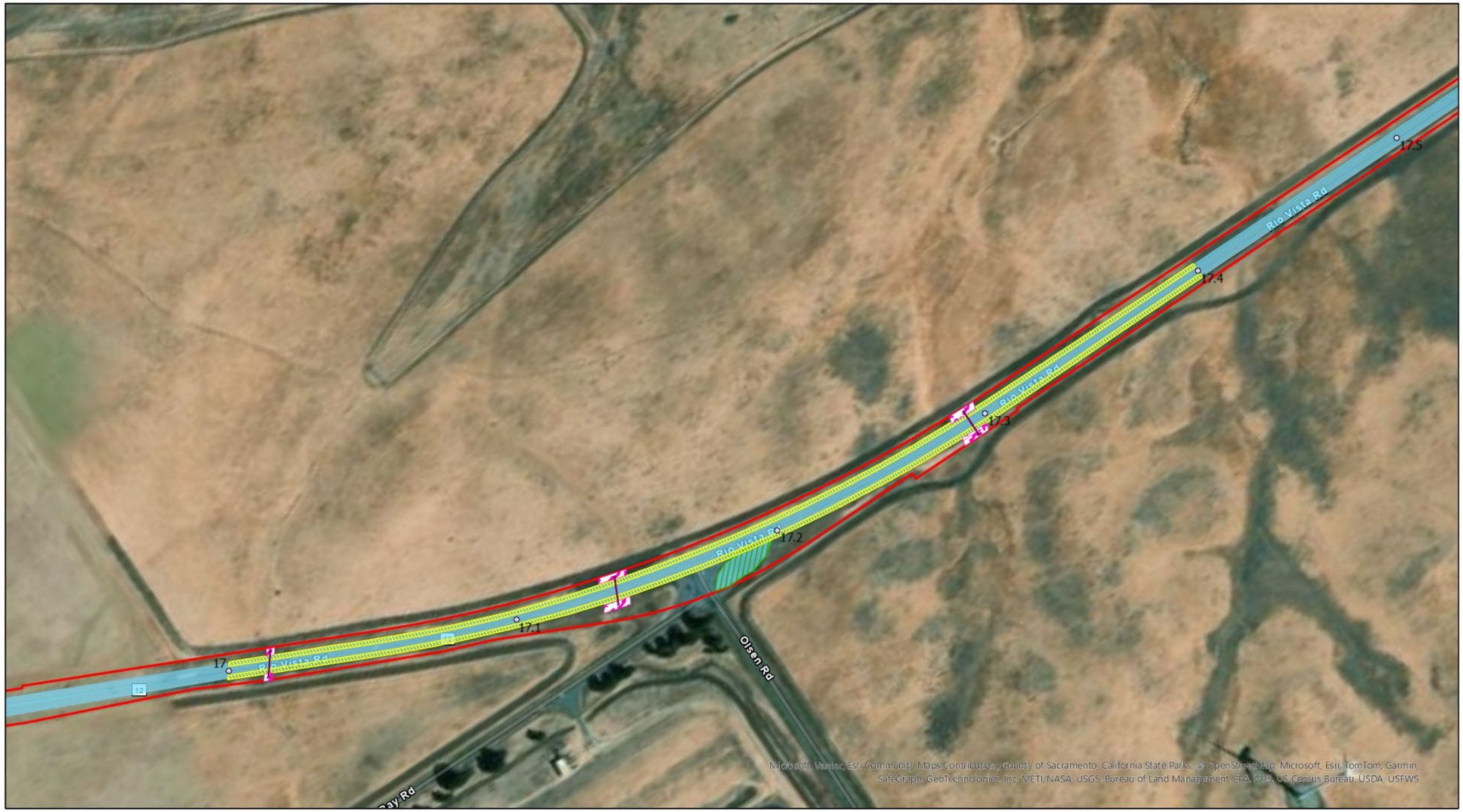


Figure E-F. Project Footprint.

Map 5 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

Scale: 1:3,290

0 0.03 0.06 0.13 0.19 0.25 Miles

N

- Right-of-Way (ROW)
- Project Footprint
- Culverts
- Culvert Work Areas
- New Guardrail
- Cut Slope
- Possible Staging Area
- Shoulder Widening
- Postmiles (PM)

Caltrans



Figure F-1. Project Footprint.

Map 6 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California



Figure F-1. Project Footprint.
Map 7 of 11
State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

Scale: 1:3,290

0 0.03 0.06 0.13 0.19 0.25 Miles

N

- Right-of-Way (ROW)
- Project Footprint
- Culverts
- Culvert Work Areas
- New Guardrail
- Cut Slope
- Possible Staging Area
- Shoulder Widening
- Postmiles (PM)

Caltrans



Figure F-1. Project Footprint.

Map 8 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California



Figure F-1. Project Footprint.

Map 9 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

Scale: 1:3,290

0 0.03 0.06 0.13 0.19 0.25 Miles

N

- Right-of-Way (ROW)
- Project Footprint
- Culverts
- Culvert Work Areas
- New Guardrail
- Cut Slope
- Possible Staging Area
- Shoulder Widening
- Postmiles (PM)

Caltrans



Figure F-1. Project Footprint.

Map 10 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

Scale: 1:3,290

0 0.03 0.06 0.13 0.19 0.25 Miles

N

- Right-of-Way (ROW)
- Project Footprint
- Culverts
- Culvert Work Areas
- New Guardrail
- Cut Slope
- Possible Staging Area
- Shoulder Widening
- Postmiles (PM)

Caltrans



Figure F-1. Project Footprint.

Map 11 of 11

State Route 12 Pavement Preservation
SOL-12-14.10/20.68
EA: 04-0AA53 EFIS: 0419000507
Solano County, California

Appendix G Public Comments and Comment Responses

Comment from the Office of Assemblywoman Lori D. Wilson

From: Muegge, Alexander <Alexander.Muegge@asm.ca.gov>
Sent: Wednesday, June 10, 2026 10:50 AM
To: Chance, Christopher@DOT <christopher.chance@dot.ca.gov>
Subject: Currie Road inquiry

Hi Chris!

Alex Muegge here, the Communications Director for Assemblywoman Lori Wilson. Thank you for chatting with me about the State Route 12 Pavement Preservation Project (EA 0AA53) in Solano County, which my Member represents.

To locate the project, the Initial Study with Proposed Mitigated Negative Declaration said it is located on SR 12, between postmile (PM) 14.10 and 20.68 in Solano County, California, located approximately 0.6 miles west of Denverton Overhead to **Currier Road**. After speaking with my District Office and looking at the map, I believe "Currier Road" should be changed to **Currie Road**.

I downloaded the Initial Study with Proposed Mitigated Negative Declaration from here: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs#solano. "Currier Road" is mentioned 5 times throughout the document.

We are going to put out a flyer letting our residents know they can give feedback on this project from June 5-July 5.

Thank you,

Alex Muegge (pronounced "Meggy")
Communications Director

Assemblywoman Lori D. Wilson
California's 11th District
P: (916) 319-2011
E: Alexander.Muegge@asm.ca.gov
a11.asmdc.org

LORI D. WILSON
Assemblywoman, District 11

Response to Comment from Assemblywoman Lori D. Wilson

Thank you for your comment. The name of the road has been corrected from "Currier" to "Currie" throughout the document.

Comment Memorandum from the California Department of Fish and Wildlife

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STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE

GAVIN NEWSOM, Governor
MEGHAN HERTEL, Director

Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
wildlife.ca.gov

July 3, 2026

California Department of Transportation, District 4
ATTN: Xenia Rangaswami, Environmental Scientist
Post Office Box 23660 MS-8B
Oakland, CA 94623-0660
Xenia.Rangaswami@dot.ca.gov

Subject: Solano State Route 12 Pavement Preservation Project (04-0AA53), Mitigated Negative Declaration, SCH No. 2026060207, City of Fairfield, Solano County

Dear Ms. Rangaswami:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt a Mitigated Negative Declaration (MND) from the California Department of Transportation (Caltrans) for the Solano State Route 12 Pavement Preservation Project (04-0AA53) (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Caltrans

Objective: The proposed Project activities (Project Activities) include pavement dig-outs, cold planing, asphalt concrete (AC) overlay, AC dikes, centerline and shoulder (edge line)

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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rumble strips, shoulder widening, and drainage improvements, upgrade metal beam guardrail, upgrade traffic signing panels, and delineate (pavement (e.g. center lines, edge lines, lane dividers).

Location: The Project Area consists of the area surrounding State Route (SR)-12 east of the City of Fairfield (City), Solano County, and along SR-12 between postmile (PM) 14.10 and 20.68, approximately 0.6 miles west of Denverton Overhead to Currie Road. Approximate GPS coordinates 38.183546°N 121.842583°W.

Timeframe: Construction is expected to begin Spring 2029 and end Winter 2030. Work will be primarily at night and will take place over two construction seasons, with one rainy season in between. The Build Alternative is expected to take approximately 120 working days to construct.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Caltrans in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

COMMENT 1: California Tiger Salamander (*Ambystoma californiense*), MND pages 3-14 to 3-16, B-7 to B-8

Issue: The MND does not adequately evaluate and mitigate potential impacts to California tiger salamander (*Ambystoma californiense*) to less-than-significant levels from disruptions during nocturnal activity periods or fully contemplate all impacts from habitat loss. The MND appears to partially base this determination on an incorrection assumption no California tiger salamander can be active in the summer and states: "California tiger salamander *aestivate (become dormant) in burrows during the dry months.*"

The Project includes considerable night work and could result in unmitigated impacts to California tiger salamander and their upland or breeding habitat, including, but not limited to: 1) direct impacts in the entire Project area where suitable California tiger salamander habitat occurs. Direct impacts would include permanent and temporary habitat loss from ground-disturbing activities and mortality of California tiger salamander, and 2) indirect impacts, such as increased lighting and other edge effects and hydrological modifications that alter offsite habitat, which also may result in injury or mortality of California tiger salamander.

2-1

Additionally, the Project Feature (PF) PF-BIO-1,Wildlife Exclusion Fencing, and Avoidance and Minimization Measure (AMM) AMM-BIO-3,Biological Monitoring, do not adequately address the level of protection necessary to ensure California tiger salamander impacts are properly minimized and fully mitigated (California Fish and Game Code, § 2081(b)(2) (2026)). Therefore, for the reasons identified, Project impacts on California tiger salamander would be potentially significant without additional evaluation and supporting protective measures.

Supporting Evidence: A recent Caltrans project (EA 04-2X550; ITP# 2081-2024-012-03) documented regular night activity mid-July through the driest and hottest months of the year. During these warmer months the project experienced many mortalities until the days became shorter and weather conditions were more amiable (e.g. cooler temperatures and periods of precipitation).

California tiger salamander are most active at night during dry months and artificial lighting can disrupt the production of melatonin in *Ambystoma* salamanders if they are exposed to it, altering metabolic rates and reducing tolerance to high temperatures (Perry et al. 2008). In addition, *Ambystoma* salamanders can become disoriented and miss the cue to migrate if there is artificial light, which could affect breeding (Perry et al. 2008).

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California tiger salamander is a CESA listed threatened species, and the Central California distinct population segment is also federally listed as threatened. Thus, California tiger salamander is considered threatened under CEQA pursuant to CEQA Guidelines section 15380. Therefore, if California tiger salamander habitat is present on or adjacent to the entire Project area where suitable California tiger salamander habitat occurs, including, the Project may substantially reduce the number or restrict the range of a threatened species, which would be a *mandatory finding of significance* pursuant to CEQA Guidelines section 15065, subdivision (a)(1).

Recommended Mitigation Measures and/or Guidance: To reduce potential impacts to California tiger salamander to less-than-significant and comply with CESA, CDFW recommends developing (or improving) AMM's associated with PF References below.

- Include an AMM associated with PF-BIO-3, Wildlife Exclusion Fencing, to include more descriptive details in how California tiger salamander impacts will be avoided and minimized in areas of active construction by incorporating the following measure:

    - Temporary Covered Species Barrier. Prior to construction a wildlife exclusion fence plan shall be provided to CDFW for review and written approval. Upon approval, exclusion fencing shall be installed to prevent California tiger salamander from dispersing into the Project Area. Exclusion fencing shall be designed to allow California tiger salamander to leave the Project Area using a one-way funnel or other method approved by CDFW. Exclusion fencing shall remain in place and be maintained throughout all phases of construction. A Qualified Biologist or other trained staff shall inspect exclusion fencing daily throughout all phases of the project. After each exclusion fence check, a Qualified Biologist or other trained staff shall prepare an exclusion fence Inspection Report documenting type and location of any damage to the temporary barrier. Any exclusion fence damage shall be repaired within 48 hours. As part of the wildlife exclusion fence plan, refuge opportunities, such as coverboards (3-foot x 3-foot plywood) or straw wattles shall be provided every 100 feet along both sides of the exclusion fence. All exclusion fencing shall be removed within 30 days after completion of construction.

2-1

- Include the AMM's associated with PF-BIO-5, Prevention of Inadvertent Entrapment and Entanglement, to include the following measures:

    - Inspection of Pipes and Culverts. Permittee shall ensure that all construction pipes or similar structures with a diameter of two inches or greater (including any hollow openings of battery storage containers) that are stored in the Project Area for one or more overnight periods shall be either securely capped prior to storage or thoroughly inspected by a Qualified Biologist and/or Biological Monitor for California tiger salamander or other animals before the pipe is subsequently buried, capped, or otherwise used or moved in any way.

    - Open Trenches and Keyways. To prevent inadvertent entrapment of the California tiger salamander during construction, a Qualified Biologist shall check all excavated open holes, sumps, trenches, caps in culvert connections, and keyways for California tiger salamander no later than 0900 each day for trapped animals. At the close of each working day, a Qualified Biologist shall ensure all excavated, steep-walled holes or trenches more than 6 inches deep are provided with one or more escape ramps constructed of earthen fill or wooden planks with a slope of 3:1 (run: rise). Before Permittee fills trenches or holes, a Qualified Biologist shall thoroughly inspect them for trapped California tiger salamander. If a California tiger salamander is discovered by a Qualified Biologist or anyone else, work shall stop and CDFW consulted immediately.

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- Improve AMM-BIO-3 to include biological monitoring needs when night work activities is occurring by incorporating the following measure:

2-1

  - Biological Monitoring. A Qualified Biologist shall be on-site for the entire duration of any day or night construction activities where take of a listed species could occur. The Qualified Biologist may stop work at any time if necessary to protect listed species and will coordinate with the Caltrans Point of Contact (POC) Biologist and CDFW on how to proceed before work resumes.

COMMENT 2: Swainson's Hawk (*Buteo swainsoni*), MND pages 2-8, 2-9, 3-18, 3-19, and 3-29

Issue: The MND discloses multiple Swainson Hawk (*Buteo swainsoni*) occurrences near the Project Area but is mainly limited in its evaluation to only potential temporary impacts to foraging habitat and states: "*There is some potential for construction to result in temporary disturbance to nesting activity if active nests occur near the BSA. Given nearby nesting records and suitable habitat, the proposed Project would impact SWHA primarily through temporary disturbance to foraging habitat*", and that "*Compensatory mitigation is not required, as impacts are limited to temporary disturbance of foraging habitat and potential construction-related disturbance to nesting.*"

In addition to foraging habitat impacts, the Project has the potential to impact nesting Swainson's hawk through artificial lighting, auditory, and/or visual disturbances above ambient levels within 0.5 miles of Project activities. Direct and/or indirect disturbances from Project Activities may result in Swainson's hawk nest abandonment, loss of nests, loss of eggs or reduced health and vigor and loss of young and decreased foraging opportunities. The MND does not identify a suitable buffer to ensure avoidance of the "*potential temporary construction related impacts to nesting*" Swainson's hawk.

Supporting Evidence: There are at least six California Natural Diversity Database (CNDDB) Swainson's hawk nests documented in or within three miles of the Project area. If a Swainson's hawk nest is disturbed by the Project, the Project may result in a substantial reduction in the number of a threatened species, which is considered a *mandatory* finding of significance pursuant to CEQA Guidelines section 15065, subdivision (a)(1).

2-2

Recommended Mitigation Measure: To reduce potential impacts to Swainson's hawk, to less-than-significant and comply with CESA, and Fish and Game Code section 3503.5, CDFW recommends the addition of a specific Swainson's hawk mitigating measure to include the below measure.

Mitigation Measure BIO-5 (Swainson's Hawk Surveys and Avoidance Buffer): If Project activities are scheduled during the nesting season for Swainson's hawks (March 1 to September 15), prior to beginning work on the Project, a qualified biologist shall conduct surveys according to the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline) and prepare a report documenting the survey results. The Project shall obtain CDFW's written approval of the qualified biologist and survey report prior to starting construction activities between March 1 and September 15. Survey methods shall be closely followed by starting early in the nesting season (late March to early April) to maximize the likelihood of detecting an active nest (nests, adults, and chicks are more difficult to detect later in the growing season because trees become less transparent as vegetation increases). Surveys shall be conducted: 1) within a minimum 0.5-mile radius of the Project site or a larger area if needed to identify potentially impacted active nests, unless otherwise approved by CDFW in writing, and 2) for at least the two survey periods immediately prior to initiating Project-related construction activities. Surveys shall occur annually for the duration of the Project. The qualified biologist shall have a minimum of two years of experience implementing the survey methodology. If active Swainson's hawk nests are detected, the Project shall immediately notify CDFW and implement a 0.5-mile construction avoidance buffer around the nest until the nest is no

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longer active as determined by a qualified biologist, unless otherwise approved by CDFW in writing. Any detected nesting Swainson's hawk shall be monitored by the qualified biologist to ensure it is not disturbed during construction activities, unless otherwise approved in writing by CDFW. If take of Swainson's hawk cannot be avoided and/or alterations of these buffers and survey requirements are needed, the Project shall consult with CDFW pursuant to CESA and obtain an Incidental Take Permit (ITP) before Project activities commence.

2-2

COMMENT 3: Burrowing Owl (*Athene cunicularia*), MND pages 3-21 to 3-22, 3-30

Issue: The MND does not adequately evaluate and mitigate potential impacts to burrowing owl. AMM-BIO-5 (MND. Page 3-30) describes measures to take if an active burrowing owl nest is found, however it does not specify during the breeding AND non-breeding season. Burrowing owl are dependent on burrows at all times of the year for survival or reproduction, therefore abandonment or eviction from nesting, roosting, overwintering, and satellite burrows or other sheltering features may lead to indirect impacts or "take" which is prohibited under CESA and Fish and Game Code section 3503.5.

Additionally, AMM-BIO-5 does not specify an avoidance buffer distance for active burrowing owl burrows. This species can be impacted by audio and/or visual disturbances up to 500 meters (1,640 feet) away according to the *Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012). There are multiple CNDDB burrowing owl occurrences within and near the Project Area. Therefore, the Project could result in burrowing owl burrow abandonment, loss of young, reduced health and vigor of owlets, injury or mortality of adults, and permanent wintering (i.e., non-nesting) or nesting habitat loss.

Supporting Evidence: Burrowing owl is a CESA-candidate threatened species because the species' population viability and survival are adversely affected by risk factors such as precipitous declines from habitat loss, fragmentation, and degradation; evictions from nesting sites without habitat mitigation; wind turbine mortality; human disturbance; and eradication of California ground squirrel (*Otospermophilus beecheyi*) resulting in a loss of suitable burrows required by burrowing owl for nesting, protection from predators, and shelter (Shuford and Gardali 2008; *Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012)). Preliminary analyses of regional patterns for breeding populations of burrowing owl have detected declines both locally in their central and southern coastal breeding areas, and statewide where the species has experienced breeding range retraction (*Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012). Information indicates a decline in burrowing owl range over time, with burrowing owl experiencing population declines in regions of California, and threats to burrowing owl, coupled with long-term population declines, suggest a high degree and immediacy of threat to burrowing owl in California (CDFW 2024). If burrowing owl are wintering or nesting on or within 500 meters of the Project area, Project impacts to burrowing owl would be *potentially significant*.

2-3

Recommended Mitigation Measures: To reduce potential impacts to burrowing owl to less-than-significant and comply with CESA and Fish and Game Code section 3503 et seq., CDFW recommends revising AMM-BIO-5 to include the below measure.

Burrowing Owl Survey and Avoidance Buffer: A qualified biologist shall conduct a burrowing owl habitat assessment within 500 meters (1,640 feet) of the Project area pursuant to the *Department of Fish and Game* (now CDFW) *Staff Report on Burrowing Owl Mitigation* (CDFW 2012 Staff Report, available at: https://wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds), unless otherwise approved in writing by CDFW. The qualified biologist shall have a minimum of two years of experience implementing the CDFW 2012 Staff Report survey methodology resulting in detections. The habitat assessment shall focus on searching the CNDDB and potentially other sources (e.g., INaturalist) for any burrowing owl records on or within one mile of the Project area, vegetation type and height, suitable burrows (with an opening greater than 11 centimeters [cm] in diameter and a depth greater than150 cm), burrow surrogates (culverts, piles of concrete rubble, piles of soil, burrows

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created along soft banks of ditches and canals, pipes, and similar structures), and presence of burrowing owl sign (tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, and nest burrow decoration material), and the presence of burrowing owl individuals or pairs. If the habitat assessment does not identify suitable habitat and surveys are not conducted as described below, an additional habitat assessment shall be conducted within 14 days prior to construction and if new potentially suitable burrowing owl refugia are present surveys shall be conducted as described below, unless otherwise approved in writing by CDFW. The results of the habitat assessment shall be emailed to the CDFW contact below, or if unavailable another CDFW representative, and the Project shall obtain CDFW's written approval of the habitat assessment prior to starting Project activities.

If suitable burrowing owl habitat is observed, 4 surveys shall be conducted to detect the presence of burrowing owl pursuant to the CDFW 2012 Staff Report. The site visits shall be spread evenly throughout the breeding or non-breeding season. The Project shall obtain CDFW's written approval of the survey results prior to starting Project activities. In addition, a survey shall be completed within 14 days prior to the start of construction, as described in the CDFW 2012 Staff Report. Surveys shall occur during burrowing owl nesting and wintering seasons for the duration of the Project, unless otherwise approved in writing by CDFW.

2-3 If burrowing owl is detected, the Project shall immediately notify CDFW. The Project shall avoid impacts to the burrowing owl and implement a 1,640-foot buffer area around the owl site in which no Project activities shall occur, unless otherwise approved in writing by CDFW. A qualified biologist shall monitor any detected owl to ensure it is not disturbed.

If the Project cannot ensure burrowing owl and their burrows are fully avoided, the Project shall consult with CDFW and obtain a take authorization or otherwise demonstrate compliance with CESA. Take is likely to occur and the Project shall obtain an ITP if:

1) burrowing owl surveys of the Project area detect burrowing owl occupancy of burrows or burrow surrogates, or 2) there is sign of burrowing owl occupancy on the Project area within the past three years and habitat has not substantially changed. Occupancy means a site that is assumed occupied if at least one burrowing owl has been observed occupying a burrow or burrow surrogate within the last three years. Occupancy of suitable burrowing owl habitat may also be indicated by burrowing owl sign including its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site. If burrowing owl, or their burrows or burrow surrogates, are detected within 500 meters (1,640 feet) of the Project area during burrowing owl surveys, but not on the Project area, the Project shall consult with CDFW to determine if avoidance is feasible or an ITP is warranted, and shall obtain an ITP if take cannot be avoided and comply with the ITP. The City shall mitigate the loss of unoccupied wintering or nest sites through preservation, through a conservation easement or purchase of wintering or nesting burrow credits from a CDFW approved conservation bank, of other known wintering or nest sites, as applicable, at a ratio of 2:1 unless another ratio is required by an ITP, in which case the City shall comply with the ITP.

Caps, Pipes, and Hoses: To prevent burrowing owl from sheltering or nesting in exposed material; all construction pipes, culverts, hoses or similar materials greater than two inches in diameter stored at the Project area shall be capped or covered before the end of each work day and shall be inspected thoroughly for wildlife before the pipe or similar structure is buried, capped, used, or moved.

COMMENT 4: Light Impact Analysis, MND page B-3

2-4 **Issue:** The MND states that roadway pavement, grinding, and resurfacing will take place at night to minimize traffic disruption. The Project is situated in an undeveloped section of SR-12 and requires a significant amount of night work over two construction seasons. The MND proposes to mitigate night lighting (PF-BIO-6, Night Lighting) by "*all lighting will be shielded and directed downward toward the active construction area to avoid exposing nocturnal*

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wildlife to excessive glare". Artificial light pollution has the potential to significantly and adversely affect wildlife species and the habitat that supports them, alter predator-prey dynamics, and can serve as an impediment to wildlife movement and connectivity, therefore PF-BIO-6, Night Lighting, does not adequately minimize the project specific light impacts during night work.

Supporting Evidence: Burrowing owls are highly sensitive to nighttime sensory disturbance where ALAN can alter nocturnal movement patterns, foraging behavior, and prey availability, creating ecological traps near lit areas (Scobie et al. 2016) (Sarasola 2020). With burrowing owl currently treated as protected under CESA as a CESA-candidate, these disruptions may constitute take without adequate minimization measures. California tiger salamander and Swainson's hawk are also vulnerable to nighttime disturbance. Increased illumination can disrupt amphibian movement corridors and elevate predation risks for California tiger salamander, while nesting Swainson's hawk may experience nighttime stress and decreased reproductive success due to elevated sensory disturbance.

Recommendationss: The MND should acknowledge that unavoidable artificial light at night (ALAN) associated with night work may significantly affect multiple sensitive species known or expected in the project vicinity, including burrowing owl, California tiger salamander, and Swainson's hawk.

2-4

Because ALAN impacts cannot be fully avoided, the MND should require stricter lighting minimization using fully shielded, low-intensity, amber-spectrum fixtures and illumination restricted only to active work zones, along with adaptive controls to limit duration and extent of lighting consistent with wildlife-sensitive lighting principles (DCCEEW 2023). Expanded nighttime buffers should be applied around active burrows, California tiger salamander upland refugia and movement areas, and Swainson's hawk nests, supplemented by nocturnal monitoring to detect behavioral changes and adjust lighting or work timing accordingly. Where significant residual impacts remain after minimization, compensatory habitat measures should be included to offset long-term sensory and ecological disturbance.

Recommended Mitigation Measures:

Temporary and Permanent Artificial Light at Night (ALAN) Emission Restrictions: All (temporary and permanent) ALAN design should meet the recommendations of the lighting resources described in the Dark Sky Society Guidelines (2020) ((https://www.darkskysociety.org/handouts/LightingPlanGuidelines.pdf) and incorporate fully shielded (full-cutoff) or zero uplight as defined in Dark Sky Guidelines to ensure light is directed downward onto the roadway, preventing upward light pollution and reducing stray light and shall not be directed into natural areas outside of the road surface to prevent additional light pollution and disruption of nocturnal wildlife activity. All Project lighting should also use amber or orange, low-wavelength lights (typically 560nm–610nm), which are less visible to many animals and insects.

COMMENT 5: Wildlife Connectivity Improvements

Issue: The MND does not identify or address wildlife connectivity issues in this stretch of SR-12 identified as part of a priority barrier for terrestrial wildlife (Barrier ID: W155; Barrier Name: SR-12 (Walters Road to SR-113) (CDFW 2021). After Assembly Bill (AB) 2344 passed in 2022,

2-5

Caltrans plays a central role in the implementation to remediate existing wildlife connectivity priorities. In addition, CDFW created a team to assist Caltrans with the implementation of AB 2344, developed the Terrestrial Wildlife Connectivity Barriers Dataset, and provide technical advice regarding wildlife connectivity to Caltrans and advance connectivity science in California. CDFW's Bay Delta Region staff remain interested and available to assist Caltrans meet priority wildlife connectivity remediation needs for this project.

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Supporting Evidence: SR-12 (Walters Road to SR-113) barrier is over 16 miles in length affecting California tiger salamander and other herpetofauna. The road elevation and parallel roadside drainages create a barrier that is difficult for amphibians to traverse. Caltrans SR-12 pavement projects may have the opportunity for undercrossing enhancements by implementing movement studies, culvert, and road studies to develop well-designed undercrossings. Surveys conducted in 2025 found California tiger salamander on both sides of SR12, within the right of way, and California tiger salamander have been found deceased on the roadway (Sarah Estrella, email, June 25, 2026).

A recent Caltrans project (EA 04-2X550; ITP# 2081-2024-012-03) (that is also part of a priority barrier for terrestrial wildlife SR-12 (Walters Road to SR-113)) is immediately west of the proposed project and incurred an unexpected, yet unprecedented amount of California tiger salamander occurrences (over 150 occurrences between July 2025 and Jan 2026) due to a pond near the Project site. Connectivity features were developed as ITP mitigation without proper movement or road studies to adequately improve the needs of the species. As a result, no additional culverts were installed, direction curbs directing California tiger salamander safely away from the roadside were not connected, and proper long-term cover was not provided for California tiger salamander that found themselves exposed during daylight hours.

2-5

Recommended Mitigation Measure: To reduce potential impacts to California tiger salamander and other herpetofauna, to less-than-significant and comply with CESA, AB 2344, and Senate Bills 1250 and 790, CDFW recommends early engagement with CDFW's Caltrans connectivity liaison to improve connectivity features and recommend including the measure below.

Permanent Barrier Restriction to Support Wildlife Connectivity. The Permittee shall design and implement the Project to avoid and/or restrict the installation of permanent barriers to wildlife movement. Project design shall be consistent with CDFW Wildlife Connectivity Priority Barriers recommendations and Caltrans wildlife connectivity guidance, and in alignment with state policy direction under AB 2344 and Senate Bills 1250 and 790, which emphasize integrating wildlife connectivity and collision reduction into transportation planning and infrastructure. The Project shall avoid continuous or impermeable features (e.g., solid fencing, walls, or roadway elements) within mapped or known movement corridors unless demonstrated to be necessary for public safety and only where wildlife permeability is maintained or improved.

Where barriers cannot be avoided, the Permittee shall incorporate wildlife-permeable design features, such as crossing structures, strategically placed openings (e.g. escape ramps), and exclusion fencing (e.g. median and roadside cement barriers) designed to guide wildlife to safe crossing locations rather than impede movement, consistent with Caltrans requirements to improve connectivity (per AB 2344). Project design shall develop in coordination with CDFW and Caltrans to ensure the project does not create new or exacerbate existing movement barriers and supports long-term functional landscape connectivity.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to the CNDDB. The CNDDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

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ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the MND to assist Caltrans in identifying and mitigating Project impacts on biological resources. Due to the issues presented in this letter, CDFW concludes that the MND does not adequately identify or mitigate the Project's significant, or potentially significant, impacts on biological resources. Deficiencies in the Lead Agency CEQA document can affect later project approvals by CDFW in its role as a Responsible Agency. In addition, because of these issues, CDFW has concerns that Caltrans may not have the basis to approve the project or make "findings" as required by CEQA unless the environmental document is modified to eliminate and/or mitigate significant impacts, as reasonably feasible (CEQA Guidelines, §§ 15074, 15091 & 15092).

Questions regarding this letter or further coordination should be directed to Karen Taylor, Senior Environmental Scientist (Specialist), at (707) 287-2144 or Karen.Taylor@wildlife.ca.gov; or Jason Faridi, Senior Environmental Scientist (Supervisory), at Jason.Faridi@wildlife.ca.gov.

Sincerely,

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REFERENCES

California Department of Fish and Wildlife (CDFW). (2021). 2024. California Natural Diversity Database (CNDDB) Management Framework. California Department of Fish and Wildlife. Sacramento, CA. Website https://wildlife.ca.gov/Data/BIOS [accessed June 2026]

CDFW. 2024. Petition Evaluation for Western Burrowing Owl (*Athene cunicularia hypugaea*). Report to the Fish and Game Commission. California Department of Fish and Wildlife, P.O. Box 944209, Sacramento, CA.

CDFW. (2021). Wildlife connectivity: Barriers to wildlife movement. Sacramento, CA: CDFW. Retrieved June 24, 2026, from https://wildlife.ca.gov/Conservation/Wildlife/Connectivity/Barriers#reports

CDFW.2018. Report to the Fish and Game Commission: A Status Review of the Tricolored Blackbird (Agelaius tricolor) in California. State of California Natural Resources Agency, Sacramento, CA. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=154287&inline

CDFW. 2016. Status Review: Swainson's Hawk (*Buteo swainsoni*) in California, reported to the California Fish and Game Commission, five-year status report. State of California

Docusign Envelope ID: EBA4B87E-4A7B-88B6-82AF-9815D8CA947B

Natural Resources Agency, Sacramento, CA.
https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=133622&inline

CDFW. 2012. Department of Fish and Game Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency, Sacramento, CA.

Department of Climate Change, Energy, the Environment and Water (DCCEEW). (2023). *National Light Pollution Guidelines for Wildlife*.

Ogden, L. J. E. 1996. Collision course: The hazards of lighted structures and windows to migrating birds. Toronto, Canada.

Perry, G., B. W. Buchanan, M. Salmon, and S. E. Wise. 2008. Effects of night lighting on urban reptiles and amphibians in urban environments. Pages 239–256 *in* J. C. Mitchell, R. E. Jung Brown, and B. Bartholomew, editors. Urban Herpetology. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT, USA.

Scobie, C.A., Bayne, E.M., & Wellicome, T.I. (2016). *Influence of human footprint and sensory disturbances on night-time space use of an owl*. Endangered Species Research, 31: 75–87.

Sarasola, J.H. (2020). *Artificial light at night as a driver of urban colonization by an avian predator*. Landscape Ecology, 36. Springer Nature.

Responses to California Department of Fish and Wildlife Comment Memorandum

Response to Comment 2-1

Caltrans acknowledges that California tiger salamander (CTS) can be active in the summer, including at night. Caltrans has added two new AMMs to supplement PF-BIO-5: Prevention of Inadvertent Entrapment and Entanglement. The new AMM-BIO-8: Inspection of Pipes and Culverts stipulates that during construction, pipes or similar structures that are stored in the Project area overnight will be securely capped. The new AMM-BIO-9: Open Trenches and Keyways Inspection specifies that a qualified biologist will check all excavated open holes, sumps, trenches, caps in culvert connections, and keyways for CTS daily. A qualified biologist will ensure that all excavated steep-walled holes or trenches more than 6 inches deep are provided with escape ramps and that holes and trenches will be inspected before being filled. Caltrans will stop work and consult with CDFW if CTS is discovered.

Caltrans has added AMM-BIO-7: Temporary Covered Species Barrier to include daily biological monitoring of fencing, the installation of refuge areas, and creation of a fencing plan which will be provided to CDFW prior to construction. A qualified biologist or other trained staff will inspect exclusion fencing daily and prepare an inspection report. Any damage would be repaired within 48 hours. During the Design phase, Caltrans will explore ways to minimize the amount of fencing used to prevent entrapment of CTS. During the Design phase, Caltrans will explore ways to minimize the amount of fencing used to prevent entrapment of CTS. Additionally, fencing will be removed within 30 days of the completion of work. As part of the wildlife exclusion fence plan, refuge opportunities, such as coverboards or straw wattles shall be provided at regular intervals along both sides of the exclusion fence. Coverboards will be inspected at the beginning of the workday prior to the start of construction.

Response to Comment 2-2

The proposed Project does not include any tree removal or removal of active or historic Swainson's hawk nests. Caltrans notes CDFW's suggestion for a 0.5-mile survey radius and avoidance buffer for Swainson's hawk. Caltrans projects currently in construction (including EA 04-2Q550) have implemented a 0.25-mile radius, as stipulated in Incidental Take Permit No. 2081-2024-012-03 permit from CDFW. Therefore, Caltrans has added AMM-BIO-10: Swainson's Hawk Assessment and Avoidance, stating that if construction occurs between

March 15 and September 15, a qualified biologist will conduct surveys within a 0.25-mile radius of the Project site. If an active nest is discovered, a 0.25 mile no-work buffer will be maintained around the nest until the young fledge. Surveys will be conducted prior to construction, as stated in PF-BIO-3: Nesting Bird Surveys. Caltrans does not anticipate take of Swainson's hawk; therefore, an ITP from CDFW would not be required for this species. During the Design phase, if the potential for take is identified, Caltrans will consult with CDFW to determine any additional permitting requirements.

Response to Comment 2-3

Caltrans acknowledges that burrowing owls may be impacted by audio and/or visual disturbances during the breeding and non-breeding seasons. Pre-construction burrowing owl habitat surveys will be conducted by a qualified biologist within Caltrans right-of-way (ROW), which includes both pavement and off-pavement surfaces.

Caltrans has added AMM-BIO-8, which states that construction pipes, hoses, or similar structures will be inspected and covered before being stored overnight or buried. Caltrans has also added AMM-BIO-11: Western Burrowing Owl Pre-Construction Surveys, which states that an agency-approved Biologist would conduct pre-construction surveys for western burrowing owls prior to the breeding season (February 1 through August 31) within Caltrans ROW. Caltrans does not anticipate take of burrowing owl; therefore, an ITP from CDFW would not be required for this species. During the Design phase, if the potential for take is identified, Caltrans will consult with CDFW to determine any additional permitting requirements.

Response to Comment 2-4

Caltrans acknowledges that nighttime lighting may disturb wildlife, including CTS, Swainson's hawk, and burrowing owl. Lighting options will be explored during the Design phase, including amber-spectrum lights and other options such as 2700K lights. The proposed Project would not install any new permanent lighting. Caltrans has replaced PF-BIO-6: Night Lighting with AMM-BIO-6: Night Lighting, which states that lighting fixtures should incorporate fully shielded (full-cutoff) or zero uplight to reduce light spill and glare into natural habitat. Lighting will be limited to the minimum illumination necessary to maintain safe working conditions and will be directed toward the active construction area and away from natural areas. Caltrans will coordinate further with CDFW on construction lighting during the Design phase and permitting phase.

Response to Comment 2-5

The proposed Project does not include any new permanent barriers. The median of the roadway will be striped, but no barrier will be installed. Additionally, the proposed Project would rehabilitate seven culverts (Table 2-1), which would provide better access for wildlife to cross the highway. Caltrans staff met with CDFW's wildlife connectivity specialist on July 21st, 2026, to discuss opportunities for increasing connectivity for CTS and other species. Caltrans agreed to explore these further during the Design phase. Caltrans will inspect culverts in the proposed Project area and consider options for clearing out or upsizing culverts that could provide passage for CTS. Further coordination with CDFW will occur during the Design phase and permitting phase.