State Route 12 Bridge Scour Mitigation Project

SONOMA COUNTY, CALIFORNIA
CALTRANS DISTRICT 4
STATE ROUTE 12 – SON PM # 25.82/33.31
EA 04-4H050; Project ID # 0413000080

Initial Study with Mitigated Negative Declaration

Prepared by the California Department of Transportation

July 2018
General Information About This Document

What’s in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Initial Study with Mitigated Negative Declaration, for the proposed project located in Sonoma County, California. Caltrans is the lead agency under the National Environmental Policy Act. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each alternative, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study circulated to the public for 30 days between April 20, 2018, and May 21, 2018. Comments received during this period are included in Chapter 4. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document and the related technical studies are available for review at California Department of Transportation District 4, 111 Grand Avenue, Oakland, California 94612. This document may be downloaded at the following website: http://www.dot.ca.gov/dist4/envdocs.htm.

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# Initial Study With Mitigated Negative Declaration

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<th>25.82 and 33.31</th>
<th>4H050</th>
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<td><strong>Project title:</strong></td>
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<td><strong>Lead agency name and address:</strong></td>
<td>California Department of Transportation 111 Grand Avenue, Oakland, CA 94612</td>
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<tr>
<td><strong>Contact person and phone number:</strong></td>
<td>Arnica MacCarthy, Acting Branch Chief (510) 286-7195</td>
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<td><strong>Project location:</strong></td>
<td>Unincorporated Sonoma County, CA</td>
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<td><strong>General plan description:</strong></td>
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<td><strong>Zoning:</strong></td>
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| **Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements); CEQA Responsible Agencies are denoted with an *:** | • Biological Opinion from the United States Fish and Wildlife Service  
• Programmatic Biological Opinion from the National Marine Fisheries Service  
• Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife*  
• Clean Water Act 404 Nationwide Permit from the U.S. Army Corps of Engineers  
• Clean Water Act 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board*  
• Section 2081 Incidental Take Permit from the California Department of Fish and Wildlife* | |

Additional copies of this document, as well as the technical studies this document relies on, are available for review at the Caltrans District 4 office, 111 Grand Avenue, Oakland, CA 94612, or online at [http://www.dot.ca.gov/d4/envdocs.htm](http://www.dot.ca.gov/d4/envdocs.htm).

Stefan Galvez-Abadia  
Chief, Office of Environmental Analysis  
Caltrans, District 4

7-5-18  
Date

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<tr>
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<tr>
<td>°F</td>
<td>degree Fahrenheit</td>
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<td>Americans with Disabilities Act</td>
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<td>AMM</td>
<td>Avoidance and Minimization Measure</td>
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<td>Area of Potential Effects</td>
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<td>BAU</td>
<td>Business-as-usual</td>
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<tr>
<td>BIRIS</td>
<td>Bridge Inspection Records Information System</td>
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<tr>
<td>BMP</td>
<td>best management practice</td>
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<td>BSA</td>
<td>Biological Study Area</td>
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<td>Cal/EPA</td>
<td>California Environmental Protection Agency</td>
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<td>California Department of Forestry and Fire Protection</td>
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<td>CGP</td>
<td>Construction General Permit</td>
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# List of Abbreviated Terms

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<td>CIDH</td>
<td>cast-in-drilled-hole</td>
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<td>CNDDB</td>
<td>California Natural Diversity Database</td>
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<tr>
<td>CO₂</td>
<td>carbon dioxide</td>
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<td>CRLF</td>
<td>California red-legged frog</td>
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<td>CTP</td>
<td>California Transportation Plan</td>
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<tr>
<td>DPS</td>
<td>Distinct Population Segment</td>
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<tr>
<td>DSA</td>
<td>disturbed soil area</td>
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<td>DTSC</td>
<td>California Department of Toxic Substances Control</td>
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<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
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<td>EO</td>
<td>Executive Order</td>
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<td>U.S. Environmental Protection Agency</td>
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<td>ESA</td>
<td>Environmentally Sensitive Area</td>
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<td>Federal Highway Administration</td>
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<td>foothill yellow-legged frog</td>
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<td>greenhouse gas</td>
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<tr>
<td>IPCC</td>
<td>International Panel on Climate Change</td>
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<tr>
<td>IS</td>
<td>Initial Study</td>
</tr>
<tr>
<td>LPSTP</td>
<td>longitudinal peaked stone toe protection</td>
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<tr>
<td>MMTCO₂e</td>
<td>million metric tons of carbon dioxide equivalent</td>
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<td>MND</td>
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<td>--------------</td>
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<tr>
<td>mph</td>
<td>mile(s) per hour</td>
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<tr>
<td>NAHC</td>
<td>Native American Heritage Commission</td>
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<td>NES</td>
<td>Natural Environment Study</td>
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<td>NHTSA</td>
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<td>OHWM</td>
<td>ordinary high-water mark</td>
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<td>PBO</td>
<td>Programmatic Biological Opinion</td>
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<td>PCC</td>
<td>Portland cement concrete</td>
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<tr>
<td>PC/PS</td>
<td>pre-cast/pre-stressed</td>
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<tr>
<td>PLAC</td>
<td>permits, licenses, agreements, and certifications</td>
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<td>PM</td>
<td>post mile</td>
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<td>ROW</td>
<td>right-of-way</td>
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<td>rock slope protection</td>
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<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
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<tr>
<td>SB</td>
<td>Senate Bill</td>
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<td>SCH</td>
<td>State Clearinghouse</td>
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<td>SLR</td>
<td>sea-level rise</td>
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<td>SLR Guidance</td>
<td><em>State of California Sea-Level Rise Interim Guidance Document</em></td>
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<td>SR</td>
<td>State Route</td>
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<td>SWPPP</td>
<td>stormwater pollution prevention plan</td>
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<tr>
<td>SWRCB</td>
<td>State Water Resources Control Board</td>
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<tr>
<td>TCE</td>
<td>temporary construction easement</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>USACE</td>
<td>U.S. Army Corps of Engineers</td>
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<td>WEF</td>
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Chapter 1 Project Goal, Purpose, and Need

1.1 Introduction

The California Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA) for the State Route (SR) 12 Bridge Scour Mitigation Project (proposed project) in Sonoma County. Caltrans proposes to address scour at Sonoma Creek Bridge (No. 20-0027) (Post Mile [PM] 25.82) and at Hooker Creek Bridge (No. 20-0030) (PM 33.31), by replacing both bridge structures.

Both the Sonoma Creek Bridge and Hooker Creek Bridge have been determined to be scour critical. Caltrans considered several alternatives for addressing the scour condition at the Sonoma Creek Bridge, and decided to proceed with bridge replacement. Section 2.7 discusses the alternatives considered and provides reasons for proposing replacement of the Sonoma Creek Bridge. The Caltrans Bridge Inspection Records Information System (BIRIS) assessment of the scour condition of the Hooker Creek Bridge recommends bridge replacement. Although the title of this Initial Study/Mitigated Negative Declaration (MND) includes “mitigated”, mitigation refers to the proposed bridge replacements as addressing the existing scour condition, thereby improving the bridges’ structural integrity; this usage is not to be confused with the definition of “mitigation” as used under CEQA.

The SR 12 Bridge Scour Mitigation Project combines the Sonoma Creek Bridge and Hooker Creek Bridge for environmental review because of their near proximity on SR 12 (the bridges are approximately 8 miles apart), similar deficiencies, and the ability to use shared staging areas and equipment for simultaneous construction of both bridges.

1.2 Project Location

The proposed project involves two bridges located in the rural area on SR 12 (see Figure 1). The first is Sonoma Creek Bridge, located at Sonoma Creek, between the City of Santa Rosa and the Town of Kenwood, between Hoff Road and Adobe Canyon Road (see Figure 2). The second is the Hooker Creek Bridge, located at Hooker Creek between Madrone Road and Cavedale Road, which is between the towns of Glen Ellen and Agua Caliente (see Figure 3).
1.3 Project Goal

Both the Sonoma Creek Bridge and Hooker Creek Bridge have been found to be scour critical, which means that the bridges’ supports may be undermined by strong creek currents eroding the area around the piers and abutments. Excessive scour could lead to failure of the piers and/or abutments which could, in turn, lead to bridge collapse. The project goal is to address scour by replacing both bridge structures.

1.4 Purpose and Need

1.4.1 Project Purpose
The purpose of the proposed project is to address the scour-critical Sonoma Creek Bridge and Hooker Creek Bridge by replacing both bridge structures with structurally sound crossings of SR 12, thereby enhancing highway safety.

1.4.2 Project Need
The project is needed because scour is undermining the bridges' footings. The proposed project is needed to address the concerns detailed below.

SONOMA CREEK BRIDGE

- **Scour.** Bridge scour is the removal of streambed material caused by swiftly moving water from around bridge abutments or piers. Scour has exposed the footing of the center bridge pier. Sonoma Creek Bridge has been found to be scour critical, which means that the bridge structure is at risk of failure due to highly eroded material around the primary support members. Further scour at the bridge could weaken the pier and compromise the structural integrity of the bridge.

- **Bridge railing.** The existing bridge railing is metal beam guardrail, which does not meet current Caltrans standards. If the bridge were replaced, a separate project for bridge rail upgrade would not be necessary. Replacement of the bridge railing is needed to meet current Caltrans standards, thereby enhancing highway safety.
FIGURE 2
Project Area - Sonoma Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California

LEGEND
紫色  Project Area (0.47 acre)
青色  Proposed Bridge
浅黄色  Proposed Temporary Access Road
黄色  Proposed Sidewalk
绿色  Proposed Road Widening
深蓝色  Proposed Smart Cushion
深蓝色细线  Proposed Guardrail
红色虚线  Caltrans Right of Way
蓝色线  Sonoma Creek

图示展示了Sonoma Creek Bridge的项目区域，包括四个象限：东北、西北、东南和西南。图中标注了拟建桥梁、临时通道、人行道、道路拓宽、智能衬垫和加利福尼亚州交通局的路线。地图还显示了Sonoma Creek的位置。地图的范围从25英尺到50英尺。
FIGURE 3
Project Area - Hooker Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California
HOOKER CREEK BRIDGE

- **Scour.** Hooker Creek Bridge has been found to be scour critical. Scour has undermined the footings of the bridge to the extent that any further disturbance could cause settlement of the bridge footings and compromise its structural integrity. The Caltrans (BIRIS) assessment of the scour condition recommends bridge replacement.

- **Upstream erosion.** On the north bank of Hooker Creek at the upstream bridge abutment, considerable erosion has taken place. Further erosion could create a situation wherein water could get behind the bridge abutment, which could cause the bridge to collapse.

- **Bridge railing.** The existing bridge railing is metal beam guardrail, which does not meet current Caltrans standards. If the bridge were replaced, a separate project for bridge rail upgrade would not be necessary. Replacement of the bridge railing is needed to meet current Caltrans standards, thereby enhancing highway safety.

### 1.5 Project Funding

This project is proposed for funding from the State Highway Operation and Protection Program 201.111. The estimated cost for the Sonoma Creek Bridge portion of the project is $5.5 million. The estimated cost for the Hooker Creek Bridge portion of the project is $6.5 million.
Chapter 2  Project Description

The proposed project would remove the existing Sonoma Creek Bridge and Hooker Creek Bridge, and replace them with new, single-span bridge structures. The project description includes a discussion of the proposed project, and construction methodology that would apply at each bridge location. This discussion is followed by common project features that would apply to the project at both bridge locations.

2.1 Sonoma Creek Bridge

The project proposes to replace the existing bridge with a single-span bridge. The roadway configuration would include two, 12-foot-wide lanes, two 8-foot-wide shoulders, and a 6-foot-wide sidewalk and pedestrian railing in the westbound direction. This bridge type would also benefit the environment because, as part of this project, the existing pier in the middle of the creek channel could be removed, thereby restoring the natural creek bed and improving creek flows.

SR 12 at the existing Sonoma Creek Bridge is a 2-lane conventional highway with a posted speed limit of 50 miles per hour (mph). The roadway on either end of the bridge has two 12-foot-wide lanes with 8-foot-wide shoulders. On the bridge itself, SR 12 has two 12-foot-wide lanes with 7-foot-wide shoulders. An existing 4-foot-wide sidewalk is located on the westbound side of the bridge (see Figure 2). There are no sidewalks on the SR 12 roadway. The length of the project area at Sonoma Creek Bridge project location is approximately 250 feet along SR 12, and the construction site area is approximately 0.47 acre.

The existing Sonoma Creek Bridge is a two-span bridge, with abutments at the Sonoma Creek banks and a pier in the center of the creek channel. The original 1923 bridge is a reinforced-concrete, girder-type structure; the 1951-widened section of the bridge is reinforced concrete slab. There is an existing precast Portland cement concrete (PCC) slab erosion control wall in the northwestern quadrant of the bridge (see Figure 2 for orientation of quadrants described in the text) extending downstream for approximately 50 feet. Figure 4 shows the Sonoma Creek Bridge crossing of SR 12, and Figure 5 shows the pier in the center of the creek channel of Sonoma Creek.
Chapter 2 Project Description

State Route 12 Bridge Scour Mitigation Project
Initial Study with Mitigated Negative Declaration

Figure 4  Sonoma Creek Bridge—View Looking East on SR 12

Figure 5  Sonoma Creek Bridge—Side View of Bridge Showing Center Pier
2.1.1 Proposed Project

The proposed project at the Sonoma Creek Bridge location would remove the existing 46-foot-wide bridge, and replace it with a 51-foot-wide precast/prestressed (PC/PS) type structure. A PC/PS type structure is constructed by casting concrete into pre-assembled forms, in combination with rebar and steel cable (strand) reinforcement. The new structure would be 63 feet long, replacing the existing bridge of the same length. The new Sonoma Creek Bridge would generally occupy the same space as the existing bridge, but would be slightly wider, due to the wider shoulders and wider sidewalk.

The abutment piers would be cast-in-place concrete supported by cast-in-drilled-hole (CIDH) piles. CIDH piles are constructed by drilling holes into the earth using a drill rig, then lowering reinforcing steel into the hole and backfilling it with concrete. Each precast member would be lowered onto the abutments by crane. The new bridge would match the existing roadway lanes and current standards for shoulder width (8 feet), widen the sidewalk to 6 feet, and include a railing, for a total width of 51 feet. The new bridge would be constructed at the same profile grade as the existing bridge. The new bridge railing in the eastbound direction would be concrete bridge railing, specifically concrete barrier type 85. In the westbound direction, a type 85 barrier would be constructed between the roadway shoulder and the sidewalk. On the other side of the sidewalk a pedestrian guardrail would be constructed. The pedestrian guardrail would be 42 inches tall, have vertical pickets, and be similar in appearance to the existing bridge railing. The preliminary project plans (see Appendix A1) show details of the proposed Sonoma Creek Bridge replacement.

A short portion of the roadway approaches would be modified to conform to the new bridge with new pavement. The project footprint, including roadway approaches, is shown on Figure 2.

The SR 12 roadway would be widened so that it would taper to match the width of the new bridge. The southeastern pavement transitions into an existing driveway, located in the southeastern quadrant, adjacent to the Sonoma Creek Bridge (see Figure 2). This driveway would be repaved as part of the restoration of the adjacent roadways; no other driveways are located in the project area. Roadway embankments may be modified and re-enforced at a 2:1 slope. The project footprint, including roadway embankment and work areas, is shown on Figure 2.
The existing bridge has a 4-foot-wide sidewalk. The proposed bridge would provide a replacement sidewalk meeting the current Americans with Disabilities Act’s (ADA’s) standard width of 6 feet. On the bridge, the sidewalk would be concrete with a polyester overlay. Pavement for the sidewalk leading up to the bridge would be hot-mix asphalt. The sidewalk would have a slope that complies with the ADA and would be constructed at both approaches to the bridge, to match the roadway grade to the bridge sidewalk grade (see Appendix A1).

2.1.2 Construction Methodology
This section discusses how construction would occur at the Sonoma Creek portion of the proposed project.

CONSTRUCTION STAGING AND TRAFFIC MANAGEMENT
The Sonoma Creek Bridge project would be constructed in two stages. The first stage would remove and replace the eastbound half of the existing bridge; the second stage would demolish and replace the westbound half of the existing bridge. The center pier extends across both lanes under the bridge, and half of the pier would be removed during each of the two stages. Additional project details are shown in preliminary project layouts in Appendix A1.

Each construction stage (or season) would restrict traffic to 24-hour-signalized, one-way, traffic control (reversing traffic control operations), with only one travel lane through the work area.

A road for construction access beneath the bridge would be located at the southeastern quadrant of the bridge (see Figure 2). The access road would be approximately 15 feet wide and up to 100 feet long. The access road would be removed, and the area would be restored and revegetated following construction of the bridge.

Each construction season would last approximately 5 months (extending between June through October), and 2 construction seasons would be required. The project at the Sonoma Creek Bridge site would take approximately 18 months to construct from start to completion. During this timeframe, there would be periods of no construction to meet regulatory requirements to not disturb creek waters.

During construction periods, signalized, one-way traffic control, would result in more than 15-minute delays, up to a maximum of 1 hour (Caltrans 2017a). Between construction seasons (approximately November through May), the roadway would be open to two travel lanes through the work area.
The proposed project construction would require short-term, overnight roadway closures at the Sonoma Creek Bridge site, involving detour or lane closures with flagging and one-way traffic control. Detour routes around the Sonoma Creek Bridge are inadequate; therefore, allowable hours for complete highway closures would be limited to late nights and early morning hours. One potential detour route is via Warm Springs Road, to Bennett Valley Road, Summerfield Road to SR 12; however, this route is 21 miles long, and would take approximately 37 minutes to travel. In addition, this detour route is on narrow and winding stretches of road (Caltrans 2017a). Roadway closures would be required primarily when shifting between stages or during critical bridge construction operations that would require closing a lane for safety to motorists and construction personnel. Approximately 3 to 5 overnight roadway closures would be required at the Sonoma Creek Bridge site.

A traffic management plan would be prepared to address vehicular and pedestrian access during the construction phases. The plan would include provisions for accessibility through or around the project area, for emergency and medical vehicles associated with essential services. A public information officer would be assigned to this project during the construction phase to keep the public informed on the status of the project, and provide information about road closures, accessibility, and need for use of alternate routes to be disseminated to the public and public emergency services.

**Excavation**

Excavation would be needed to remove existing and construct new bridge abutments. There would also be minor excavation for the minor roadway widening (described above) and some embankment fill adjacent to the roadway widening. Excavation may be approximately 8 feet wide and 3 feet deep for roadway widening.

**Drainage**

There are no existing drainage systems on the Sonoma Creek Bridge structure. Water currently drains off the sides of the bridge. There are no drainage structures proposed for the replacement bridge.

**Dewatering and Creek Channel Impacts**

The new bridge construction and removal of the existing bridge would require dewatering of Sonoma Creek. De-watering would be performed by constructing a cofferdam just upstream of the work limits and then conveying water through a pipe during the construction season (June through October), when the creek experiences low flows. Cofferdams are structures that essentially dam the creek. This can take
different forms, such as gravel bag cofferdams. The downstream end may also have a cofferdam at the pipe outfall. By the end of each construction season, the creek would be restored to its original condition, and the cofferdams and pipe would be removed.

**RIGHT-OF-WAY IMPACTS**
The project area at the Sonoma Creek Bridge site is entirely within the existing SR 12 right-of-way (ROW). Construction at this location would not require temporary construction easements (TCEs) of property outside of the existing SR 12 ROW.

**UTILITIES**
At the Sonoma Creek Bridge location, utility lines are present longitudinally on both sides of the roadway, including some that cross the roadway horizontally near the bridge. The utility poles supporting these lines may be jointly owned, and may carry electrical distribution, telephone, and cable television lines. If the utility poles or lines conflict with the proposed work, then they would be relocated or protected in place during construction. Caltrans would verify if any underground gas, electric, water, or sewer lines are present within the project area. Caltrans would coordinate with utility owners to relocate or protect utilities prior to construction.

**TREE REMOVAL AND VEGETATION**
Construction of the Sonoma Creek Bridge would occur within the Caltrans ROW. As many as eight trees may need to be removed to access the project site and allow for a slightly wider bridge and roadway. Tree removal would be limited and include five valley oaks (*Quercus lobata*) and three willow species (*Salix*). Tree removal would generally take place between October 1 and January 31 the year prior to commencing construction, to avoid removing trees during the bird nesting season.

### 2.2 Hooker Creek Bridge

SR 12 at the existing Hooker Creek Bridge is a 2-lane conventional highway with a posted speed limit of 50 mph. The roadway surrounding Hooker Creek Bridge has two 12-foot-wide lanes with 8-foot-wide shoulders. On the bridge itself, SR 12 has two 12-foot-wide lanes with 6-foot-wide unpaved (dirt) shoulders. There are no dedicated pedestrian facilities at the Hooker Creek Bridge location. Figure 6 shows the Hooker Creek Bridge crossing of SR 12; and Figure 7 shows the northeastern side of the bridge looking downstream. The length of the project area at the Hooker Creek Bridge project location is approximately 610 feet along SR 12, and the construction site area is approximately 1.06 acres.
Figure 6  Hooker Creek Bridge – View Looking North on SR 12

Figure 7  Hooker Creek Bridge – Side View of Bridge Looking Downstream
2.2.1 Proposed Project

The proposed project at the Hooker Creek Bridge location would remove the existing 36-foot-wide bridge, and replace it with a 45-foot-wide PC/PS slab-type structure. A PC/PS-type structure is constructed by casting concrete into pre-assembled forms, in combination with rebar and steel cable (strand) reinforcement. The new structure would be 40 feet long, replacing the existing 24-foot-long bridge. Each precast member (portion of the bridge deck) would be lowered into place by crane onto abutment piers, supported on a precast concrete pile cap over a secant pile wall. A secant pile wall is a type of retaining wall that is formed by constructing intersecting reinforced concrete piles. This allows the bridge to match the existing roadway width and meet current standards for shoulder width (8 feet). The new bridge would be constructed at the same height of the existing bridge (it would not be lower or higher than current conditions). The new bridge would be constructed while a portion of the existing bridge would remain in place. The top layers of the existing bridge would be removed to allow placement of the precast members. The new bridge railing would be composed of concrete bridge railing, specifically concrete barrier type 85. A 45-foot-long, Type 5, retaining wall would be constructed at the northwestern abutment to avoid embankment fill placement into the creek channel. The preliminary project plans (see Appendix A2) show details of the proposed Hooker Creek Bridge replacement.

The roadway shoulders would be widened to match the new bridge width, conforming to the nearest driveways. The roadway modifications would affect only a portion of one local driveway to accommodate the shoulder widening. Access to this driveway would be maintained during construction.

Some realignment of the channel in Hooker Creek would be performed to remove a gravel bar and restore the creek to a more natural flow. Longitudinal peaked stone toe protection (LPSTP) would be placed along the northerly creek bank on the upstream (east) side of the bridge to protect the bridge abutment and restore the creek bank. LPSTP is described in detail in the following sections.

SR 12 would be widened to provide standard shoulders to match the new bridge, including standard 8-foot-wide shoulders, with a short section of 9-foot-wide shoulders in the eastbound direction. This would result in: widening the roadway by 5 feet on both sides, for approximately 150 feet beyond the south bridge approach; and, similarly, 5 feet on the eastern side for 25 feet beyond the north bridge approach.
To facilitate construction access to the creek and bridge supports, a temporary access road would be located in the southwestern quadrant of the bridge (see Figure 3 for orientation of quadrants described in the text). This access road would be between 15 and 20 feet wide, extending from the roadway to the proposed bottom of the embankment, and approximately 225 feet long. This access road would be compacted earth that would be removed and restored following construction.

2.2.2 Construction Methodology
This section discusses how construction would occur at the Hooker Creek portion of the proposed project.

CONSTRUCTION STAGING AND TRAFFIC MANAGEMENT
At the Hooker Creek site, the replacement bridge would be constructed in four stages, as follows:

- Stage 1: Construct the western side of the bridge.
- Stage 2: Construct the eastern side of the bridge.
- Stage 3: Construct the middle of the bridge.
- Stage 4: Remove the remainder of old bridge.

For construction during each of the 4 stages, approximately 2 feet of the existing bridge deck would be removed by scraping. Then, the new bridge deck would be constructed by having each section lowered into place by crane onto abutment pile caps supported on a secant piles wall. Piles would be cast-in-place, and would be either soft piles (piles without steel reinforcement), or hard-piles (piles with steel reinforcement). Finally, a precast pile cap, which would serve as the abutment, would be placed over the piles. It is anticipated that the abutment pile cap footings could be as deep as 5 feet, with the piles going as deep as 25 feet. At total of 44 piles (22 piles per abutment) would be constructed.

Following construction of the new bridge, the remainder of the existing bridge would be removed in one final stage, with its foundation removed down to 3 feet below grade, leaving the remainder in place underground.

Two lanes of traffic would be maintained throughout the construction period; therefore, long-term roadway closures with detours are not anticipated. However, there may be need for overnight roadway closures with detours or short-term lane closures, with flagging and one-way traffic control. This would be needed primarily when traffic would be shifted between stages or during critical bridge construction.
operations for safety of motorists and construction personnel. Approximately 4 to 5
overnight roadway closures would be required at the Hooker Creek Bridge site.
Traffic could be detoured along Agua Caliente Road West to Arnold Drive to
Madrone Road (Caltrans 2017a).

A traffic management plan would be prepared to define the detour route, outline the
procedures to follow for detouring traffic and managing traffic controls, and provide
details about how to maintain adequate access for emergency and medical vehicles
associated with essential services. A public information officer would be assigned to
this project during the construction phase to keep the public and public emergency
services informed on the status of the project, information about road closures, and
advanced notification of alternate routes.

Construction at the Hooker Creek Bridge site would occur over 3 years. It is
anticipated that work in the creek would occur between June 15 and October 15 for
3 years (3 construction seasons).

**EXCAVATIONS**
Excavation would be needed at Hooker Creek, primarily for construction of the new
bridge abutments just beyond the existing creek bed, and for removal of existing
bridge piers and abutments to a depth that would allow abandonment of the existing
bridge footings. Furthermore, an existing gravel bar in Hooker Creek would be
removed as part of the creek channel work (see “De-watering and Creek Channel
Impacts” subsection below).

**DRAINAGE**
Existing roadway drainage at the Hooker Creek Bridge consists of drainage ditches
outside of the paved roadway. As part of the proposed project, these drainage ditches
may need to be regraded outside of the widened shoulder sections. The new bridge is
anticipated to drain the same way the existing bridge does, and water from the new
bridge deck would flow past the bridge to the roadway drainage ditches and not into
Hooker Creek.

**DEWATERING AND CREEK CHANNEL IMPACTS**
Hooker Creek would require de-watering during the bridge construction, primarily to
provide access for proper placement of bridge segments and demolition activities, and
creek access for channel and bank restoration (see below). No falsework would be
required in the creek bed because the bridge would use precast girder and deck
members to be placed by crane from the roadway level.
Extensive work would be undertaken within the Hooker Creek channel. In addition to the bridge construction, the project would reestablish the alignment of the creek by removing a gravel bar upstream from the Hooker Creek Bridge to preserve the northerly creek bank and existing wing wall.

Additionally, the proposed LPSTP along the northerly creek bank upstream would provide protection and stability to the creek bank and facilitate growth of vegetation. LPSTP is a system that involves placing a berm of stone in front of an eroding creek bank; mature deep-planting vegetation (such as willows or alder) behind the berm; and fill, stones, and more vegetation between the berm and the existing eroding bank. The LPSTP encourages the establishment of natural vegetation that further stabilizes the creek bank, as well as enhances the natural environment along that segment of the creek. The LPSTP at Hooker Creek would extend along the northerly creek bank for approximately 45 feet; it would be approximately 8 feet wide and 3 to 4 feet high. Removal of the gravel bar and construction of LPSTP requires a work area of approximately 60 feet by 40 feet within Hooker Creek channel.

Both the bridge construction and the creek realignment would require de-watering Hooker Creek. De-watering is typically performed by constructing a cofferdam just upstream of the work limits and then conveying water through a pipe during the construction season. The downstream end may also have a cofferdam at the pipe outfall. By the end of each construction season, the creek would be restored to its original condition, and the cofferdams and pipe would be removed. It is anticipated that work in the creek would occur between June 15 and October 15 for 3 years (3 construction seasons).

**RIGHT-OF-WAY IMPACTS**

The Hooker Creek Bridge project would require approximately 0.19 acre (8,280 square feet) of permanent acquisition of property from 2 private properties. Additionally, TCEs of approximately 0.09 acre (3,920 square feet) would be needed on 3 properties for dewatering and access to the bridge site during the construction of the new bridge and removal of the old structure. One driveway taper would be modified due to shoulder widening. Access to properties adjacent to the project area would be maintained throughout construction.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of Caltrans Title VI Policy Statement.
Chapter 2 Project Description

UTILITIES
Overhead utility lines supporting electrical distribution lines, telephone lines, and cable television are present along both sides of the roadway, including utility lines that cross the roadway horizontally. They are within the roadway ROW and in conflict with the proposed work. Poles on both sides of the roadway would need to be relocated prior to construction.

Underground utilities, including gas, electric, water, and sewer lines, are also within the project area. Caltrans would coordinate with utility owners to avoid conflict with these utilities prior to construction.

TREE REMOVAL AND VEGETATION
Tree and vegetation removal within the Hooker Creek Bridge project construction area, including the ROW, the TCE, and the access road down to the creek, would occur prior to construction. Fifty-one trees are proposed to be removed, as follows: coast live oak (*Quercus agrifolia*) (24); valley oak (*Quercus lobata*) (10); willow species (*Salix*) (5); big-leaf maple (*Acer macrophyllum*) (5); ash (*Fraxinus spp.*) (3); California buckeye (*Aesculus californica*) (2); blue gum (*Eucalyptus globulus*) (1); and chokecherry (*Prunus virginiana*) (1). This removal would likely be conducted outside of bird nesting season, between October 1 and January 31.

2.3 Construction Schedule
Site construction would begin by removing vegetation at both project sites. All work within Sonoma and Hooker Creek channels, as well as any drainage improvements, would occur during the dry season, from June 15 to October 15, to avoid impacts on protected aquatic species (for more information, see Chapter 3, Section IV, Biological Resources).

Bridge construction at the Sonoma Creek Bridge site would require approximately 18 months to complete. Bridge construction at the Hooker Creek Bridge site would require approximately 3 years to complete.

Construction at both bridge locations would begin simultaneously, with the Sonoma Creek Bridge replacement portion of the project being completed in advance of the Hooker Creek Bridge replacement. Construction is anticipated to begin in 2020. Night work could be required at both sites. Downward directional lighting would be used during nighttime construction work.
2.4 Construction Staging

All materials and equipment for this project are anticipated to be stored offsite. There are no designated stockpile or equipment storage areas located within the proposed project areas. The construction contractor would be responsible for bringing in and removing materials and equipment in such a way that the materials do not need to be stored or stockpiled on site.

2.5 Construction Equipment

The construction equipment that would likely be used for the proposed project includes the following:

- Backhoes, excavators, and concrete cutters would be used for clearing, grubbing, removing existing pavement, and excavating at abutments.
- A front loader would load debris into trucks for offsite disposal.
- A drill rig would be used to remove soil, install piles, and drive casings and/or piles in for the abutments.
- Cranes could be used to move construction equipment to and from the creek beds, deliver materials, and set (erect) PC/PS concrete slabs.
- A pavement grinder would be used at the Hooker Creek Bridge site to remove the top layer of bridge deck.
- Concrete mixer trucks and pump trucks would pump concrete for cast-in-place structures.
- Concrete pavers, jackhammers, pavement saws, and compaction equipment would be used.
- Work would require use of an asphalt concrete paver and a roller.

2.6 Project Features

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects (such as best management practices [BMPs]) and measures included in the Standard Plans and Specifications, or as standard special provisions, are considered to be integral to the
project. Such features have been considered prior to any significance
determinations. These project features are discussed in detail in Chapter 3 and
included in Appendix C.

2.7 Alternatives Considered but Eliminated from Further
Discussion Prior to the Draft Initial Study

The Caltrans BIRIS assessment of the scour condition for Sonoma Creek Bridge
recommended placement of rock slope protection (RSP) at the base of the piers and in
the creek channel, from top-of-bank to top-of-bank along the creek bed under the
bridge. This alternative was eliminated from further discussion because it was
determined that placing RSP in Sonoma Creek would be detrimental to the creek
environment, and permitting the project may not be possible from responsible
agencies. Two alternatives were considered to avoid using RSP in Sonoma Creek.
One alternative called for a retrofit strategy, which would have placed micro-piles
around the bridge abutments and center pier. The other alternative was a full bridge
replacement. Caltrans determined that the bridge replacement would have fewer
impacts in Sonoma Creek, eliminate the need for other projects on the bridge (such as
replacement of bridge railing) in the near future, and be comparable in cost to the
retrofit strategy. Therefore, Caltrans decided to proceed with the bridge replacement.

The Caltrans BIRIS assessment of the scour condition of the Hooker Creek Bridge
recommends bridge replacement. No other alternatives were considered for
addressing scour at Hooker Creek Bridge.

2.8 Permits and Approvals Needed

Table 1 lists the permits, licenses, agreements, and certifications (PLACs) that are
required for project construction.

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<thead>
<tr>
<th>Agency</th>
<th>PLAC</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Fish and Wildlife Service</td>
<td>Biological Opinion</td>
<td>Received July 5, 2018</td>
</tr>
<tr>
<td>National Marine Fisheries Service</td>
<td>Programmatic Biological Opinion</td>
<td>Received April 13, 2018¹</td>
</tr>
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</table>

¹ The National Marine Fisheries Service (NMFS) agreed that the proposed project may utilize the
Programmatic Biological Opinion from NMFS through the Caltrans Routine Maintenance and Repair
Activities Program, dated October 18, 2013, provided that Caltrans submit additional design plans
during the project specifications and estimates phase of the project.
Table 1  Required PLACs for Project Construction

<table>
<thead>
<tr>
<th>Agency</th>
<th>PLAC</th>
<th>Status</th>
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<tr>
<td>U.S. Army Corps of Engineers</td>
<td>Section 404 Nationwide Permit</td>
<td>Anticipated receipt 10/1/2019</td>
</tr>
<tr>
<td>San Francisco Bay Regional Water Quality Control Board</td>
<td>Section 401 Water Quality Certification</td>
<td>Anticipated receipt 10/1/2019</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>Section 1602 Lake and Streambed Alteration Agreement</td>
<td>Anticipated receipt 10/1/2019</td>
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<tr>
<td>California Department of Fish and Wildlife</td>
<td>Section 2081 Incidental Take Permit</td>
<td>Anticipated receipt 10/1/2019</td>
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</table>
Chapter 3  Proposed Mitigated Negative Declaration and CEQA Environmental Checklist

A. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project.

| ☒ Aesthetics | ☐ Agriculture and Forestry | ☐ Air Quality |
| ☒ Biological Resources | ☐ Cultural Resources | ☐ Geology/Soils |
| ☒ Greenhouse Gas Emissions | ☐ Hazards and Hazardous Materials | ☐ Hydrology/Water Quality |
| ☐ Land Use/Planning | ☐ Mineral Resources | ☐ Noise |
| ☐ Population/Housing | ☐ Public Services | ☐ Recreation |
| ☒ Transportation/Traffic | ☐ Utilities/Service Systems | ☐ Mandatory Findings of Significance |
| ☐ Tribal Cultural Resources |

B. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: [Signature]
Date: 7-5-16

Printed Name: MELANIE BRENT
For:
Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA) for the State Route (SR) 12 Bridge Scour Mitigation Project (proposed project) in Sonoma County. Caltrans proposes to address scour at Sonoma Creek Bridge (No. 20-0027) (Post Mile [PM] 25.82) and at Hooker Creek Bridge (No. 20-0030) (PM 33.31) by replacing both bridge structures. Both bridges have been found to be scour critical. Bridge scour is the removal of streambed material caused by swiftly moving water from around bridge abutments or piers. Scour critical means that the bridge support structures are at risk of failure due to scour. Further scour could compromise the structural integrity of each bridge. The purpose of the proposed project is to replace the scour-critical Sonoma Creek Bridge and Hooker Creek Bridge with structurally sound crossings of SR 12, including enhanced highway safety characteristics compared to the existing, aging, nonstandard bridges.

Determination
Caltrans has prepared an Initial Study for this project, and following public review, 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 impact on agriculture and forestry, historic resources, recreation, air quality, population and housing, tribal cultural resources, land use and planning, or mineral resources.
- In addition, the proposed project would have less-than-significant impacts to aesthetics, geology and soils, public services, transportation and traffic, cultural resources, noise, hazards and hazardous materials, greenhouse gas emissions, hydrology and water quality, and utilities.
- With Mitigation Measure BIO-1 (see Chapter 3, Section IV, Biological Resources, page 3-60) incorporated, the proposed project would have less-than-significant effects to biological resources.

Melanie Brent
Deputy District Director, Environmental Planning and Engineering
District 4-California Department of Transportation

Date 7-5-18
CEQA Environmental Checklist

<table>
<thead>
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<th>04-SON-12</th>
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<th>04-4H050</th>
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<tbody>
<tr>
<td>Dist.-Co.-Rte.</td>
<td>P.M./P.M.</td>
<td>E.A.</td>
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</table>

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A “no impact” answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not National Environmental Policy Act, impacts. 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 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.
<table>
<thead>
<tr>
<th>I. AESTHETICS: Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect on a scenic vista?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c) Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Caltrans prepared a visual impact assessment (Caltrans 2018a) for the proposed project. The findings of this analysis are presented herein.

The proposed project is located in the Sonoma Valley, in the southeastern part of Sonoma County in northern California. The landscape is characterized by low-density residential neighborhoods, rural grasslands with native oak woodlands, and agricultural fields (primarily vineyards). The land uses within the project vicinity are primarily residential and agricultural, but also include areas of vacant, state-owned land and Sonoma County park and trust land.

Route 12 is an Officially Designated State Scenic Highway, and includes the location of both project sites. The project corridor is defined as the area of land that is visible from, adjacent to, and outside the highway ROW, and is determined by topography, vegetation, and viewing distance. Replacement of existing barriers and railings from the roadway would be the most visible permanent change caused by the project. The effects of grading, tree removal and revegetation at the roadside and beneath the proposed bridges would have a temporary visual impact; the area would eventually return to a natural appearance.

To minimize visual impacts at the Sonoma Creek site, the new bridge would use a concrete barrier Type 85 in the eastbound direction and a Type 85 barrier with a 6-foot-wide sidewalk and pedestrian railing in the westbound direction. The proposed
pedestrian railing would be similar to the existing pedestrian railing in form and color.

At the Sonoma Creek site, tree removal would be limited and include five valley oaks (*Quercus lobata*) and three willow species (*Salix*). Shrub and ground cover removed within the project area would be replaced through permanent erosion control. Trees would be replaced at a 1:1 ratio, or as determined by biological permits.

At the Hooker Creek site, visual impacts would primarily be caused by the removal of vegetation within the project study area. Fifty-one trees are proposed to be removed, as follows: coast live oak (24); valley oak (10); willow species (5); big-leaf maple (5); ash (3); California buckeye (2); blue gum (1); and chokecherry (1). Trees would be replaced at a 1:1 ratio, or as determined by biological permits. All replacement trees may not fit within the project limits of the Hooker Creek Bridge site and alternate sites, and/or alternate replanting may need to be considered to meet the required replacement ratios. See further discussion under the CEQA Environmental Checklist, Section IV, Biological Resources, in the subsection concerning replacement planting and tree preservation policies and ordinances that provide protections to trees in Sonoma County.

The Type 85 concrete barriers would have a coordinated appearance with other barriers along the SR 12 corridor.

**a) No Impact**

The proposed project is not within a scenic vista. There would be no impact.

**b) and c) Less than Significant**

Replacement of existing barriers and railings would be the most visible permanent change caused by the project. The effects of grading and revegetation at the roadside and beneath the proposed bridges would have a temporary visual impact; and the area would eventually return to a natural appearance. The proposed bridge structures would be similar in character to the existing bridges; therefore, the proposed project would not disrupt or interfere with views from the highway or other locations. Implementation of Project Feature AES-1, Bridge Rehabilitation Measures, would reduce the visual impact so that the proposed project would not substantially alter the visual character of the area or quality of the site and its surroundings.
Project Feature AES-1: Bridge Rehabilitation Measures

a. Avoidance or Minimization of Construction Impacts

- New concrete structures shall be Type 85 concrete barriers in plain concrete.
- New pedestrian rail on north side of Sonoma Creek bridge shall match existing galvanized pedestrian rail in form and finish.
- RSP and rock rip rap shall be of a type that blends in with the surrounding environment.

Temporary impacts during construction would be related to the presence of construction workers, materials, and equipment for the duration of construction, and tree and vegetation removal during construction. Once construction is complete, the visual character of the project sites would be compatible with the existing project setting. Implementation of AES-2, Construction Impact Measures, and AES-3, Tree and Vegetation Removal Measures, would further reduce visual impacts during construction.

Project Feature AES-2: Construction Impact Measures

a. Avoidance or Minimization of Construction Impacts

- Place unsightly material, and areas for equipment storage and staging, so that they are not visible to neighbors and highway users, to the maximum extent feasible – without impacting existing trees and vegetation. If the above is visible, consider screening or covering items to reduce visibility.
- Revegetate all project disturbed areas.

Limit all construction lighting to within the area of work and avoid light trespass onto motorists and neighbors through directional lighting, shielding, and other measures as needed.

Project Feature AES-3: Tree and Vegetation Removal Measures

a. Avoidance or Minimization of Tree/Vegetation Removal During Construction

- Place high-visibility, temporary fencing around trees or other desirable vegetation to be protected before roadway/bridge work begins.
• Relocate the temporary construction easement area away from tree/root zones.

• Indicate trees to be removed on the plans during the design phase, after consultation with the Caltrans Landscape Associate. During construction, have the engineer field mark and approve all trees to be removed, prior to removal.

The long-term effects of the proposed project would result in a low visual impact. The temporary impacts from construction would produce low-moderate to moderate visual impacts. Project features, discussed in the impact analysis above, would reduce the temporary visual impacts that would occur during construction. Short-term visual improvement strategies (such as, revegetation at a ratio of 1:1, or as determined by biological permits) would assist in restoring the project sites to pre-construction conditions, maintaining the visual resource that is the Designated Scenic Highway along SR 12. With implementation of Project Features AES-1 through AES-3, the impact to visual resources would be less than significant.

d) Less than Significant

The proposed project would not create a substantial new source of light or glare that would adversely affect day or nighttime views in the area. Night lighting would be needed for a short-term period during some parts of construction. As required by Caltrans Standard Specification 48, Temporary Structures, truck-mounted lights may be used, and lighting would be directed to avoid glare onto oncoming traffic. Therefore, the proposed project would not result in a new source of light or glare, and impacts would be less than significant.
## II. AGRICULTURE AND FOREST RESOURCES:
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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 (CARB). Would the project:

<table>
<thead>
<tr>
<th></th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>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?</td>
<td>☐ ☐ ☒ ☐</td>
<td></td>
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</tr>
<tr>
<td>b)</td>
<td>Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐ ☐ ☐ ☒</td>
<td></td>
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</tr>
<tr>
<td>c)</td>
<td>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))?</td>
<td>☐ ☐ ☐ ☒</td>
<td></td>
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</tr>
<tr>
<td>d)</td>
<td>Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐ ☐ ☐ ☒</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e)</td>
<td>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?</td>
<td>☐ ☐ ☒ ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
At the Sonoma Creek Bridge project location, no agricultural lands would be directly affected by the project.

The Hooker Creek Bridge project includes land within the project study area designated as Unique Farmland by the California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program (California Department of Conservation 2017a). Impacts to approximately 0.087 acre of Unique Farmland would occur at the Hooker Creek Bridge site (see Figure AG-1). This land is located both within the Caltrans ROW and on an adjacent private parcel, which contains a vineyard. The land currently functions as a dirt shoulder within the Caltrans ROW. On the private parcel, the land consists of a dirt area with trees. The portion of the parcel that would be permanently acquired is adjacent to the SR 12 roadway, and is not in agricultural production.

There are no Williamson Act lands within the project footprint. There is no forest land in the project vicinity.

**a and e) Less than Significant**

The proposed project at hooker Creek Bridge would result in the direct conversion of land designated as Unique Farmland (California Department of Conservation 2017a). Direct impacts include the permanent ROW acquisition required for the roadway widening along SR 12. The direct impact resulting from the widening of the roadway is considered a permanent impact.

NRCS staff (NRCS 2018) and project analysts evaluated farmland conversion impacts on agricultural land and resources through completion of Form NRCS-CPA-106, in accordance with the Farmland Protection and Policy Act criteria (see Appendix D). Combined land evaluation and site assessment scores were determined to be 42 out of a possible 260. Therefore, impacts from conversion of 0.087 acre of unique farmland to transportation use is considered less than significant.

The loss would occur along the edge of the SR 12 roadway. It is considered a “sliver” loss and would have no substantial effect on the agricultural operation at the vineyard. No change in productivity related to project impacts is anticipated because the land that would be acquired is not used for agricultural production. There is no forest land within the project area. Therefore, no impact would occur.
FIGURE AG-1
Farmlands and Williamson Act Lands in the Vicinity of the Hooker Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California

Source:
Farmland Mapping and Monitoring Program (FMMP)
www.conservation.ca.gov/dlrp/fmmp
County of Sonoma, Permit and Resource Management Department (PRMD)
b) No Impact

The project would not conflict with existing zoning for agricultural use. There are no Williamson Act lands within the project footprint. No impact would occur.

c and d) No Impact

There is no forest land within the project area. No impact would occur.
## III. AIR QUALITY:

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

<table>
<thead>
<tr>
<th>Question</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>e) Create objectionable odors affecting a substantial number of people?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### a-e) No Impact

The proposed project (RTP ID 17-10-0025 and group listing SHOPP – Bridge Preservation Transportation Improvement Program ID VAR170010) is included in the regional emissions 2017 Plan Bay Area 2040 RTP analysis conducted by the Metropolitan Transportation Commission, for the 2017 Transportation Improvement Program. The project’s scope of work and design concept is consistent with the Regional Transportation Plan and the Transportation Improvement Program (Caltrans 2018b). Air quality study is not required due to the exempt status from regional conformity and exemption from project-level hot-spot analysis determination under 40 Code of Federal Regulations (CFR) 93.126. The project would be required to perform in accordance with Caltrans Standard Specification 7-1.02C, Emission Reduction, and with 14-9.02, Air Pollution Control, which require the contractor to comply with air-pollution control rules, regulations, ordinances, and statues that apply to the work performed for this project (Caltrans 2018b). There would be no impact.
<table>
<thead>
<tr>
<th>IV. BIOLOGICAL RESOURCES: Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less-Than-Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
</tr>
<tr>
<td>c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
</tr>
<tr>
<td>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☒ ☐ ☐</td>
</tr>
</tbody>
</table>

Caltrans has prepared a Natural Environment Study (NES) for the SR 12 Bridge Scour Mitigation Project (Caltrans 2018c). The following text summarizes and analyzes the information obtained for and presented in the NES.

**METHODOLOGY AND SURVEYS**

A biological study area (BSA), which includes the project footprint and a 50-foot-wide buffer, was developed at each project location (see Figures BIO-1a and BIO-1b) to evaluate potential impacts to natural resources. All biological surveys, except as noted below for California freshwater shrimp (CFS) (*Syncaris pacifica*), were conducted within the BSAs.
Some locations within the BSAs could not be fully surveyed because of safety concerns. CFS habitat surveys were conducted on June 9 and August 25, 2017, and extended outside of the BSAs at Sonoma and Hooker creeks, approximately 1,500 feet upstream and downstream of the project footprint as discussed in detail in the CFS habitat assessments (Caltrans 2017b and c). The surveys focused on the presence of hydrology and the specific physical habitat requirements for this 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) (2018), National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NMFS) (2018), California Native Plant Society (CNPS) (2018), California Natural Diversity Database (CNDDB) (CDFW 2018), and National Wetlands Inventory (USFWS 2017). Each special-status wildlife and plant species on the regional lists was evaluated to determine its potential to occur within the project BSAs. A table of special-status plant species, and another of special-status animals, with potential to occur within the BSA are in the NES (Caltrans 2018c). All species lists were updated in March 2018.

Caltrans determined that the federally listed species California red-legged frog (CRLF) (*Rana draytonii*), and Central California Coast steelhead (CCCS) (*O. mykiss*) Distinct Population Segment have the potential to be impacted from the proposed project. Presence for these species was inferred based on CNDDB records, habitat, and past consultations with the USFWS and the California Department of Fish and Wildlife (CDFW).

Neither the review of USFWS, CNPS, and CNDDB databases, nor the rare plants surveys conducted during vegetation assessment surveys of the project BSAs in June 2015, June 2017, and February 2018, indicated the presence of rare plants.

Tree surveys were conducted in the BSA at the Sonoma Creek Bridge site on October 27, 2017, and at the Hooker Creek Bridge site on October 29, 2017. Survey crews and biologists mapped trees greater than 4 inches diameter at breast height within the BSA (GANDA, 2017).

To determine potential impacts to waters of the U.S., the extent of Sonoma Creek and Hooker Creek within the BSA was delineated in the field on June 6, 2017, based on the limits of the ordinary high-water mark (OHWM). Drainage ditches were surveyed at the Hooker Creek Bridge location on December 27, 2017. A complete wetland delineation was conducted on February 5, 2018, to determine the presence of waters.
and wetlands within the project footprint (Caltrans 2018a). The delineation followed the methods outlined in the U.S. Army Corps of Engineers’ (USACE’s) *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2018).

**Existing Conditions**

Sonoma Creek is a 33.4-mile-long stream. Its headwaters originate from Sugarloaf Ridge State Park, and then flow downstream, discharging into San Pablo Bay within the Napa-Sonoma-Russian River Valleys ecoregion (Omernik and Griffith 2014). The project at the Sonoma Creek Bridge is located between Sonoma Mountain and Hood Mountain. Local topography consists of rolling hills, with intermixtures of forest, chaparral, grassland, and vineyards. The project BSA for Sonoma Creek Bridge lies within the Upper Sonoma Creek watershed. The topography in the project BSA at Sonoma Creek ranges from flat in uplands, to slopes adjacent to the creek, and ranges between 440 to 443 feet above mean sea level.

The project at the Hooker Creek Bridge is located between Sonoma Mountain and Hooker Canyon. Local topography consists of rolling hills, with intermixtures of forest, chaparral, grassland, and vineyards. Hooker Creek is a tributary that flows into Sonoma Creek, then discharges into San Pablo Bay. The project BSA for Hooker Creek Bridge lies within the Lower Sonoma Creek watershed. The topography within the project BSA at the Hooker Creek site ranges from flat to slopes, between 180 to 200 feet above mean sea level.

Based on historical aerial photos, Sonoma Creek and Hooker Creek within the project BSAs are intermittent streams that dry during the summer, even during years of heavy rainfall (Caltrans 2017b, 2017c).

**Vegetation Types**

Approximately 27 percent of the Sonoma Creek Bridge BSA is riparian and creek habitat (0.38 acre) (Figure BIO-1a). The vegetation types that were identified include the following: *Quercus lobata* Alliance; California Annual and Perennial Grassland Macrogroup; and vineyard. The *Quercus lobata* Alliance consists predominantly of valley oak woodland, which is endemic to California and is represented by seven valley oak trees within the BSA. Approximately 39 percent of the Sonoma Creek Bridge BSA is unvegetated areas, consisting of development, pavement, dirt roads, and barren ground.
The vegetation observed in the Sonoma Creek Bridge BSA along the upland habitat, primarily consists of ruderal grassland, with species including wild oat (*Avena fatua*), black mustard (*Brassica nigra*), and foxtail chess (*Bromus madritensis*). Herbaceous vegetation and shrubs in the riparian area largely consist of Himalayan blackberry (*Rubus armeniacus*) and poison oak (*Toxicodendron diversilobum*). Common tree species in the BSA (upland and riparian) include: valley oak (*Quercus lobata*), willow (*Salix*), big-leaf maple (*Acer macrophyllum*), Oregon ash (*Fraxinus latifolia*), Douglas fir (*Pseudotsuga menziesii*), and Grand fir (*Abies grandis*).

Approximately 39 percent of the Hooker Creek Bridge BSA is riparian and creek habitat (1.11 acres) (Figure BIO-1b). The Hooker Creek Bridge BSA includes the following habitat types: *Quercus* (*agrifolia, douglasii, garryana, kelloggii, lobata, wislizenii*) Alliance; Vancouverian Riparian Deciduous Forest; vineyard; California Annual and Perennial Grassland Macrogroup; and Forest Sliver. The *Quercus* Alliance includes 19 valley oak trees. Approximately 42 percent of the Hooker Creek Bridge BSA is unvegetated areas, consisting of development, pavement, dirt roads, and barren ground.

The vegetation observed in the Hooker Creek Bridge BSA, upland of the creek and in riparian understory, is the same as observed at the Sonoma Creek Bridge BSA. Common tree species in the BSA (upland and riparian) include: coast live oak (*Quercus agrifolia*), valley oak, willow, big-leaf maple, Oregon ash, and California buckeye (*Aesculus californica*).

The Sonoma Nuns Fire in October 2017 slightly disturbed some vegetation at both project sites. All vegetation, including portions of fire-damaged trees, is expected to recover.

**Wildlife**

Wildlife with the potential to occur within the project BSAs, include species associated with rural development, agriculture, riparian, creek, and ruderal grassland habitats. Species most likely to occur in the project BSA include: fish species, such as western mosquitofish (*Gambusia affinis*) and California roach (*Hesperoleucus symmetricus*); bird species, such as American crow (*Corvus brachyrhynchos*), American cliff swallow (*Petrochelidon pyrrhonota*), and black phoebe (*Sayornis nigricans*); reptile and amphibian species, such as Pacific tree frog (*Pseudacris regilla*), western fence lizard (*Sceloporus occidentalis*), and various snake species; and larger mammalian species, such as striped skunks (*Mephitis mephitis*), Virginia
opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), mule deer (*Odocoileus hemionus*), and mountain lion (*Puma concolor*).

**Special-status Plant Species**
Several special-status plant species have the potential to occur in the project BSA or in the project vicinity, but were eliminated from further consideration because of the absence of suitable habitat within the project footprint, and/or were absent during the biological surveys conducted in 2015, 2017, and 2018. The potential for their occurrence is based on literature review, observed populations/occurrences within a 1- to 2-mile vicinity, and/or the presence of suitable habitat. The NES includes a table of special-status plant species with potential to occur within the BSA (Caltrans 2018c).

**Special-status Animal Species**
Several special-status animal species have the potential to occur in the project BSA or in the project vicinity, but were eliminated from further consideration because of the absence of suitable habitat within the project BSA and/or were not observed during the biological surveys conducted in 2015, 2017, and 2018. The NES includes a table of special-status animals with potential to occur within the BSA (Caltrans 2018c). Three federally protected species were determined to have the potential to occur within the project BSA or in the project vicinity. They include: CRLF, CFS, and CCCS Distinct Population Segment. The potential for their occurrence is based on suitable habitat occurring within the BSAs, and observed populations/occurrences within 1 to 2 miles of the project site’s vicinity. State-listed species with the potential to occur within the BSAs include the FYLF.

**California Red-legged Frog**
The CRLF is a federally threatened and state species of special concern, which inhabits semi-permanent and permanent stream pools, ponds, and creeks with emergent and riparian vegetation and upland areas, and requires slow-moving water for breeding.

There were no protocol-level surveys conducted for CRLF at either bridge project location. Caltrans has determined that the CRLF has the potential to occur in the BSA based on CNDDB records, site habitat, and insights gained through past consultation with USFWS (Caltrans 2018c).
There are four CNDDB occurrences of CRLF within 5 miles of the Sonoma Creek Bridge BSA. Suitable dispersal habitat and non-breeding aquatic habitat are present in the project footprint at this location.

There are four CNDDB occurrences of CRLF within 5 miles of the Hooker Creek Bridge BSA. There is no suitable aquatic habitat within the BSA. Suitable upland dispersal habitat and non-breeding aquatic habitat are present in the project footprint at the Hooker Creek location.

California Freshwater Shrimp
The CFS is a federally and state-endangered crustacean that is endemic to Marin, Napa, and Sonoma counties. CFS are often found in low-elevation, low-gradient streams where riparian cover is moderate to heavy in shallow pools away from main stream flow. In the winter, CFS inhabit undercut banks with exposed roots. In the summer, CFS inhabit leafy branches touching water.

There were no protocol-level surveys conducted for CFS at either the Sonoma Creek Bridge, or the Hooker Creek Bridge project location. A habitat survey was conducted 1,500 feet in upstream and downstream of Hooker and Sonoma Creek bridges (Caltrans 2017b, c) to comply with USFWS and CDFW request that this species be considered for consultation under FESA and CESA. The habitat survey concluded that the habitat is not suitable for CFS at both project sites because the creek completely dries by August (even during high rainfall years) and, even when flows are present in August, the lack of refugia, prevent temporary colonization by individual CFS residing in downstream locations (Caltrans 2017b, c).

One CNDDB occurrence is within 5 miles of the Sonoma Creek Bridge BSA. Five known CNDDB occurrences of CFS are within 5 miles of the Hooker Creek Bridge BSA.

Nonetheless, Caltrans is assuming presence of CFS at each project site, based on USFWS and CDFW determination that the presence of CFS could not be completely ruled out at both project sites.

Central California Coast Steelhead Distinct Population Segment
CCCS Distinct Population Segment is a federally threatened fish species that can be found in completely freshwater, to almost pure seawater, including the ocean. NMFS listed the CCCS as threatened under Federal Endangered Species Act (FESA).
Critical habitat was designated in 2005 (NMFS 2005). Sonoma and Hooker creeks are within designated critical habitat for CCCS.

CCCS have been documented in Hooker Creek in the past (Leidy et al. 2005). Furthermore, in June 2017, several, stranded steelhead were observed and relocated, during a biological survey conducted by Caltrans biologists for this project.

One CNDDB occurrence and three CNDDB occurrences are within a 5-mile vicinity of the Sonoma Creek Bridge BSA and Hooker Creek Bridge BSA, respectively. A moderate to high potential exists for this special-status species to occur at both project BSAs during the rainy season, when there is sufficient flow. Therefore, Caltrans determined that CCCS have the potential to occur in the BSAs during project construction activities.

Foothill Yellow-legged Frog
The FYLF is a state-candidate threatened species, and inhabits shallow streams, riffles, and partially shaded habitats. The preferred habitat for this species is partially shaded, perennial streams. FYLF also prefer areas that have some cobble-sized substrate for egg laying. They prefer shallow waters, under 40 inches in depth. FYLF require at least 15 weeks to attain metamorphosis (Zeiner et al. 1990). Sonoma and Hooker creeks completely dry up by late summer or fall, even during high rainfall years within their BSA (Caltrans 2017b, c). Under these conditions, FYLF are likely to be restricted to pools where perennial water persists, and to adjacent areas within a few hundred feet of them, which are absent from the BSA.

At the Sonoma Creek Bridge location, there are 6 CNDDB occurrences are within a 5-mile vicinity. At the Hooker Creek Bridge location, there are 4 CNDDB occurrences are within a 5-mile vicinity.

During the surveys, FYLF was not observed in, or adjacent to, the BSAs, including in a single, non-perennial, 6-inch-deep pool observed on the eastern side of the Hooker Bridge on June 9, 2017. During early consultation with CDFW, it was nonetheless determined that the presence of FYLF in the BSAs could not be entirely ruled out because of the existence of CNDDB records of FYLF presence within 5 miles and presence of potentially suitable (but marginal) habitat conditions.
**Essential Fish Habitat**

Essential fish habitat is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (72 Federal Register 19862). Neither Sonoma Creek nor Hooker Creek are considered essential fish habitat.

**Migratory Birds**

Migratory birds, such as perching birds and ducks, are expected to nest within the BSA at both project sites. Under the Migratory Bird Treaty Act, migratory birds and any of their parts, eggs, and nests are protected from activities, including hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit.

**Wetlands and Waters of the U.S. and State**

No wetlands were found within the BSA at either project site. Potential waters of the U.S. were delineated within the BSAs (see Figures BIO-1a and BIO-1b, and Table BIO-1) and Caltrans determined that Sonoma and Hooker creeks met the requirements as waters of the U.S. under USACE guidelines (USACE 2008). USACE jurisdiction consists of all areas below the OHWM. There is approximately 0.13 acre and 200 linear feet of waters of the U.S. within the Sonoma Creek BSA, and approximately 0.08 acre and 229 linear feet of waters of the U.S. within the Hooker Creek BSA. In addition, one drainage ditch exists at each project location where jurisdiction as a water of the U.S. has not yet been determined, but where consideration as waters of the State is likely.

Potential waters of the State occur within the project footprint (Table BIO-1). Waters of the State are administered by the Regional Water Quality Control Board (RWQCB) under authority of Section 401 of the Clean Water Act. Waters of the State include all areas under OHWM. At the Sonoma Creek Bridge and Hooker Creek Bridge project sites, potential waters of the State are the same as waters of the U.S.

Figures BIO-1a and BIO-1b illustrate temporary and permanent impacts to the waters of the U.S. (waters of the State) and riparian habitat. Temporary impacts include the creek diversion system, access to the creek bed by heavy machinery and creek bed contouring below OHWM, as well as streamside and riparian impacts resulting from access needed for shoulder widening. Riparian habitats within the BSA are listed in Table BIO-2; these habitats are under the jurisdiction of the CDFW, per Section 1600 of the California Fish and Game Code.
FIGURE BIO-1a
Potential Impacts to Waters of the U.S. and State and Riparian Habitat, Sonoma Creek Bridge
Route-12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82
Sonoma County, California

Legend
- Project Area (0.47 acre)
- Biological Study Area (1.38 acres)
- Sonoma Creek
  - Potential Waters of the U.S. (0.130 acre, 200 linear feet)
  - Drainage Ditch (0.009 acre, 122 linear feet)
- Riparian Area (0.478 acre)

Impacts to Potential Waters U.S.
- Permanent - New Waters (Pier Removal) (+0.0004 acre)
- Temporary (0.017 acre)

Impacts to Riparian
- Permanent (0.009 acre)
- Temporary (0.061 acre)

Scale
1 inch = 35 feet

Santa Rosa
Sacramento
San Francisco
San Jose
Fresno

Sonoma Creek Bridge (No. 20-0027)
FIGURE BIO-1b
Potential Impacts to Waters of the U.S. and State and Riparian Habitat, Hooker Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.92, 33.31
Sonoma County, California

Legend
- Project Area (1.06 acres)
- Biological Study Area (2.85 acres)
- Hooker Creek
- Potential Waters U.S. (0.083 acres; 229 linear feet)
- Drainage Ditch (0.008 acres; 94 linear feet)
- Riparian Area (1.06 acres)

Impacts to Potential Waters U.S.
- Permanent - Longitudinal Peaked Stone Toe Protection (0.008 acre)
- Temporary (0.012 acre)

Impacts to Riparian
- Permanent (0.007 acre)
- Permanent - Longitudinal Peaked Stone Toe Protection (0.007 acre)
- Temporary (0.012 acre)

Santa Rosa
San Francisco
San Jose
Fresno
Sacramento

1 inch = 75 feet

Scale

0
75
150
Feet
Permanent impacts to riparian areas consist of shoulder widening in the Sonoma Creek and Hooker Creek riparian corridors. The temporary access roads may be considered permanent impacts by State resource agencies because they would take place over more than one construction season. The project proposes that areas that would be used as temporary access roads be restored following construction activities.

Table BIO-1 Potential Waters of the U.S. and of the State

<table>
<thead>
<tr>
<th>Resource ID</th>
<th>National Wetland Inventory Classification*</th>
<th>Jurisdiction</th>
<th>Extent Within BSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonoma Creek</td>
<td>Riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded</td>
<td>Water of the U.S. and Water of the State</td>
<td>0.130 acre; 200 linear feet</td>
</tr>
<tr>
<td>Hooker Creek</td>
<td>Palustrine shrub scrub seasonally flooded</td>
<td>Water of the U.S. and Water of the State</td>
<td>0.083 acre; 229 linear feet</td>
</tr>
<tr>
<td>Roadside Ditch at Sonoma Creek</td>
<td>N/A</td>
<td>Potential Water of the U.S. and Water of the State</td>
<td>0.009 acre; 122 linear feet</td>
</tr>
<tr>
<td>Roadside Ditch at Hooker Creek</td>
<td>N/A</td>
<td>Potential Water of the U.S. and Water of the State</td>
<td>0.008 acre; 94 linear feet</td>
</tr>
</tbody>
</table>

* USFWS 2017
N/A = not applicable

Table BIO-2 Riparian Habitat

<table>
<thead>
<tr>
<th>Resource ID</th>
<th>Jurisdiction</th>
<th>Extent Within BSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riparian Area at Sonoma Creek</td>
<td>Section 1600 of California Fish and Game Code</td>
<td>0.0435 acre</td>
</tr>
<tr>
<td>Riparian Area at Hooker Creek</td>
<td>Section 1600 of the California Fish and Game Code</td>
<td>1.06 acres</td>
</tr>
</tbody>
</table>

**POTENTIAL IMPACTS TO BIOLOGICAL RESOURCES**

**a) Less than Significant with Mitigation Incorporated**

The project could permanently and temporarily impact CRLF dispersal habitat and CCCS habitat, as a result of proposed construction activities within the BSA.

Both Sonoma Creek and Hooker Creek dry up completely by late summer or fall, even during years of high rainfall within both project BSAs. Therefore, Caltrans determined that the presence of CFS and FYLF is unlikely, and there will be no impact to these species.
While the temporary impacts to habitat for construction access at the Sonoma Creek Bridge would be removed after the project construction, the 0.084 acre of impacts, may be considered permanent by state resource agencies because the proposed project schedules extend over more than one construction season. At the proposed Sonoma Creek Bridge project site, project construction is expected to occur for two seasons. At the proposed Hooker Creek Bridge project site, project construction is expected for three seasons.

Permanent and temporary impacts to biological resources would be avoided, minimized, or mitigated through the implementation of project features, and avoidance and minimization measures (AMMs), specific species protection measures (AMM BIO-1 to AMM BIO-8), and habitat restoration (AMM BIO-1). Implementation of these measures would result in less-than-significant impacts, as discussed in the following sections. In addition, the locations of temporary access roads would be restored to at least the current environmental baseline following construction.

**California Red-legged Frog**
With the potential for CRLF to be present onsite during project construction, activities could result in the disruption, injury, or mortality to juvenile or adult CRLF individuals.

At the Sonoma Creek Bridge project site, CRLF dispersal habitat would be temporarily impacted within the construction footprint, including as a result of the temporary access road and dewatering activities. Permanent impacts to CRLF habitat would result from road widening and the retaining wall (Table BIO-3a and Figure BIO-2a).

At the Hooker Creek Bridge project site, CRLF dispersal habitat would be temporarily impacted during construction activities, by grading in the creek bottom, installing the temporary access road, and dewatering activities. CRLF habitat would be permanently impacted as a result of road widening, building of the retaining wall, and installation of LPSTP (Table BIO-3b and Figure BIO-2b).

Replacement of the existing bridges at both sites with a single-span bridge would restore creek hydrologic functions at the bridge locations, resulting in an increase in habitat area, as well as improved habitat quality and connectivity for CRLF.
FIGURE BIO-2a
Potential Impacts to CRLF Dispersal Habitat, Sonoma Creek Bridge
Route-12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82
Sonoma County, California

Legend
- Project Area (0.47 acre)
- Biological Study Area (1.38 acres)
- Sonoma Creek
- California Red-legged Frog Dispersal Habitat
  - Aquatic (0.130 acre)
  - Upland (0.794 acre)

Impacts to California Red-legged Frog Dispersal Habitat
Permanent Impacts
- Upland (0.026 acre)

Temporary Impacts
- Aquatic (0.064 acre)
- Upland (0.139 acre)

Scale
1 inch = 35 feet

0 35 70 Feet
FIGURE BIO-2b
Potential Impacts to CRLF Dispersal Habitat,
Hooker Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California

Legend
- Project Area (1.06 acres)
- Biological Study Area (2.85 acres)
- Hooker Creek
- California Red-legged Frog Dispersal Habitat
  - Aquatic (0.10 acre)
  - Upland (1.98 acres)

Impacts to California Red-legged Frog Dispersal Habitat
Permanent Impacts
- Aquatic - Longitudinal Peaked Stone Toe Protection (0.006 acre)
- Upland - Longitudinal Peaked Stone Toe Protection (0.007 acre)
- Upland - Restored (0.018 acre)

Temporary Impacts
- Aquatic (0.053 acre)
- Upland (0.487 acre)

Scale
1 inch = 75 feet

0 37.5 75 150 Feet

Santa Rosa
San Francisco
San Jose
Sacramento
Fresno
Tree trimming and removal of riparian trees and shrubs would result in the reduction of cover for CRLF at both project locations. However, the impacts would be temporary, and the canopy would recover once construction activities have halted and the sites are fully restored.

### Table BIO-3a  Approximate Loss/Gain of CRLF Habitat Types at Sonoma Creek Bridge

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (would be restored after construction)</td>
<td></td>
</tr>
<tr>
<td>Upland Dispersal (construction footprint)</td>
<td>-0.133</td>
</tr>
<tr>
<td>Aquatic Non-breeding (creek dewatered area)</td>
<td>-0.078</td>
</tr>
<tr>
<td><strong>Permanent</strong></td>
<td></td>
</tr>
<tr>
<td>Upland Dispersal (road widening, retaining wall, guardrail)</td>
<td>-0.026</td>
</tr>
<tr>
<td>Aquatic Non-breeding (pier removal)</td>
<td>+0.0004</td>
</tr>
</tbody>
</table>

*Note: a minus (-) sign indicates a loss of habitat. A plus (+) sign indicates a gain of habitat.*

### Table BIO-3b  Approximate Loss/Gain of CRLF Habitat Types at Hooker Creek Bridge

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (would be restored after construction)</td>
<td></td>
</tr>
<tr>
<td>Upland Dispersal (construction footprint, cut and fill)</td>
<td>-0.487</td>
</tr>
<tr>
<td>Aquatic Non-breeding (creek dewatered area)</td>
<td>-0.053</td>
</tr>
<tr>
<td><strong>Permanent</strong></td>
<td></td>
</tr>
<tr>
<td>Upland Dispersal (road widening, retaining wall, removal of existing bridge)</td>
<td>+0.003</td>
</tr>
<tr>
<td>Aquatic Non-breeding (LPSTP)</td>
<td>-0.008</td>
</tr>
</tbody>
</table>

*Note: a minus (-) sign indicates a loss of habitat. A plus (+) sign indicates a gain of habitat.*

All temporarily impacted habitat will be restored to pre-project conditions, and upland areas will be revegetated with native vegetation compatible with the BSA vegetation types (Project Feature BIO-8). Permanent impacts will be mitigated by the restoration and increase of aquatic habitat at Sonoma Creek Bridge and Hooker Creek Bridge (MM BIO-1).
With the implementation of project features, impacts to suitable upland dispersal habitat during, and immediately after, construction are not expected to impact CRLF individuals or populations. Such impacts are also not expected to impact the habitat’s long-term suitability to support CRLF should they occur in the project area in the future.

In addition, the project may result in a loss of small numbers of CRLF individuals, if they are present during construction. These impacts would be less than significant with the implementation of: Project Feature BIO-1, seasonal avoidance, Project Feature BIO-10, avoidance of plastic monofilament in erosion control devices, and species-specific AMMs BIO-1 to AMMs BIO-6. Finally, Caltrans will consult with the USFWS to obtain coverage under FESA in case a CRLF is incidentally injured or killed, or needs to be relocated outside of the project footprint.

**California Freshwater Shrimp**

The CFS habitat survey conducted by LSA (Caltrans 2017b, c) at both proposed project sites determined that no suitable winter or summer habitat for the CFS exists within the project BSAs; both habitats are required for CFS presence. During early consultation with the USFWS and CDFW, Caltrans agreed to conduct CFS habitat surveys because of CFS’ small potential to occur onsite during construction activities.

The CFS habitat study (Caltrans 2017b) concluded that there is no suitable CFS habitat at the Sonoma Creek Bridge’s CFS study area, based on the lack of perennial water and lack of cover. The Sonoma Creek CFS study area is an intermittent stream that dries during the summer, as confirmed by field observations made on August 25, 2017, and review of Google historical maps. The Sonoma Creek banks do not exceed 90 degrees in any location in the CFS study area, and overhanging vegetation is limited to small bank sections in a few locations. Therefore, the area lacks suitable structure necessary to support CFS.

Similarly, the CFS habitat study at Hooker Creek (Caltrans 2017c) found no suitable CFS habitat within the Hooker Creek Bridge BSA, based on high stream gradient, lack of perennial water, and lack of cover. The gradient of Hooker Creek in the CFS study area ranges between 7 to 13 percent, well above the one percent or less gradient that is typical for the species (USFWS 2008 cited in Caltrans 2017c). Flows terminated approximately 411 feet upstream of the Hooker Creek Bridge on June 9, 2017. No water was visible from that point downstream, except for a single pool on the eastern side of the bridge. Historical aerial photographs show that the creek completely dries up no later than early July during most years (Caltrans 2017c).
Furthermore, portions of the creek that appear to pool when water is present are too far from the banks to have overhanging vegetation or root masses.

In summary, the project would not impact CFS and its potential habitat because CFS presence in the project BSAs is unlikely.

Central California Coast Steelhead Distinct Population Segment

There are several proposed project activities that could potentially impact CCCS if water is present during the June 15 to October 15 in-creek work window. They include, but are limited to: fish relocation, dewatering of stream reaches, increased sediment mobilization, water quality degradation, and riparian vegetation removal. The potential impacts of these activities are detailed below.

The potential exists to impact individual juvenile steelhead if water is present during the June 15 to October 15 work window for in-creek construction activities. Project activities are scheduled to take place during the dry season, when adult CCCS are not expected to be migrating into or out of freshwater, so adult CCCS are not expected to occur. However, if water is present, the vicinity of both the Sonoma Creek Bridge and Hooker Creek Bridge could be suitable rearing habitat for juvenile CCCS. To reduce the chances that juvenile fish would be present, and subsequently harmed, during construction activities, fish would be relocated during dewatering, before any construction materials and activities are permitted into the creek channel. There would be a temporary loss of habitat within the dewatered area following the installation of the creek diversion system; however, because this impact would occur between June 15 and October 15 (Project Feature BIO-1), impacts to CCCS would be avoided.

Permanent loss of habitat, including potential spawning habitat, would occur at Hooker Creek as a result of installation of the LPSTP; however, this loss would be offset by the removal of the gravel bar along the opposing bank and the subsequent restoration of the creek bed to pre-project or better conditions, with cobble and gravel. Furthermore, the LPSTP would contribute to creek stability and the area would be revegetated, providing shaded riverine habitat. Tables BIO-4a and BIO-4b, and Figures BIO-3a and BIO-3b identify the amount of temporary and permanent impacts to steelhead habitat in the project footprint.
### Table BIO-4a  Approximate Loss/Gain of Potential CCCS Habitat at Sonoma Creek Bridge

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (dewatered creek area)</td>
<td>-0.078</td>
</tr>
<tr>
<td>Permanent (removal of existing pier)</td>
<td>+0.0004</td>
</tr>
</tbody>
</table>

### Table BIO-4b  Approximate Loss/Gain of Potential CCCS Habitat at Hooker Creek Bridge

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (dewatered creek area)</td>
<td>-0.053</td>
</tr>
<tr>
<td>Permanent (LPSTP)</td>
<td>-0.008</td>
</tr>
</tbody>
</table>

As a result of the probability that species will be present at the project sites, the NMFS Programmatic Biological Opinion (PBO) would provide coverage under FESA in case a CCCS is incidentally injured or killed, or needs to be relocated outside of the project area. With the proposed project features (Project Features BIO-1 to BIO-4, and BIO-8) and specific species AMMs BIO-7 and BIO-8, the project is not expected to result in significant impacts to CCCS individuals; but, the project could cause some harassment, and limited potential for take, due to relocation of CCCS individuals during dewatering or the installation and removal of the diversion cofferdams. Long-term, beneficial impacts to CCCS are anticipated from the removal of the existing bridge pier at the Sonoma Creek Bridge location. The removal and replacement of the bridge at the Hooker Creek Bridge location, where the new bridge is designed to be wider underneath, would allow for easier upstream and downstream migration by CCCS, and less restricted creek flow. Because the existing substrate will remain in place or be replaced with similar grades of substrate, potential spawning habitat within the BSA will not be impacted.

Improved stability of the creek bank will be achieved by placing an LPSTP along the northerly creek bank, upstream. The LPSTP is a bioengineered system that involves placing a berm of stone in front of an eroding creek bank; deeply planting mature vegetation (such as, willows or alder) behind the berm; and placing fill, stones, and more vegetation between the berm and the existing eroding bank. The LPSTP will encourage the establishment of natural vegetation that will further stabilize the creek bank, as well as enhance habitat along that segment of the creek.
Potential Impacts to Central California Coast Steelhead Habitat, Sonoma Creek Bridge Route-12 Bridge Scour Mitigation Project EA 04-4H050, SR 12, Post Mile 25.82 Sonoma County, California

Legend
- Project Area (0.47 acre)
- Biological Study Area (1.38 acres)
- Sonoma Creek
- Potential Central California Coast Steelhead Habitat (0.130 acre)

Impacts to Central California Coast Steelhead Habitat
- Permanent - Pier Removal (Restored Aquatic Habitat) (0.0004 acre)
- Temporary (0.017 acre)

Scale
1 inch = 35 feet

Sonoma Creek Bridge (No. 20-0027)
FIGURE BIO-3b
Potential Impacts to Central California Coast Steelhead Habitat,
Hooker Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California

Legend
- Project Area (1.06 acres)
- Biological Study Area (2.85 acres)
- Hooker Creek
- Potential Central California Coast Steelhead Habitat (0.08 acres)

Impacts to Central California Coast Steelhead Habitat
Permanent
- Longitudinal Peaked Stone Toe Protection (0.008 acre)
Temporary
- Temporary Construction Impacts (0.053 acre)

Scale
1 inch = 75 feet

Santa Rosa
Sacramento
San Francisco
San Jose
Fresno

1 inch = 75 feet
0 75 150
Feet
The CCCS habitat at the Sonoma Creek Bridge and Hooker Creek Bridge project locations are within designated critical habitat for the federally endangered CCCS. As described above, no permanent, significant impact to CCCS critical habitat would result from the proposed project activities. Most impacts are anticipated to be temporary. The project would be beneficial for CCCS critical habitat in the long term by reducing erosion and scour from the existing bridges, removing the existing pier at Sonoma Creek and the entire existing bridge structure from Hooker Creek, and restoring the project sites to natural conditions.

Foothill Yellow-legged Frog
There were no observations of FYLF within or adjacent to the BSA during any of the biological surveys. In addition the lack of perennial water in Sonoma and Hooker creeks, demonstrated by the CFS habitat studies (Caltrans 2017b, c), make it unlikely for this species to be present in the project BSAs. Therefore, no impact to FYLF are anticipated.

Migratory Birds
Potential impacts to migratory birds include destruction or abandonment of active nests during the bird nesting season. The project feature BIO-7, Vegetation Removal, includes the standard bird-nesting protection measures to be implemented during vegetation removal.

The same measures would be applied to prevent nest abandonment resulting from construction noise or disturbance. The qualified biologist would survey for nesting birds within the areas to be disturbed and set a perimeter buffer of 50 feet for passerines and 300 feet for raptors, before construction activities begin. All nest avoidance requirements of the Migratory Bird Treaty Act and California Fish and Game Code would be observed (including establishing appropriate protection buffers around active nests until young have fledged).

b) Less than Significant
Temporary and permanent impacts could occur to riparian habitat and creek habitat as a result of the construction of a temporary access road and other construction activities, and the installation of a creek diversion system at both proposed project locations. At the Hooker Creek Bridge project location, temporary and permanent impacts could also occur inside the creek’s bed and banks during construction of the LPTSP. There would be permanent impacts to some areas where the proposed project would permanently cut and fill portions of the project footprint, and at the Hooker
Creek Bridge location, where permanent impacts are expected to result in habitat loss due to LPSTP placement and shoulder widening. Impacts to riparian habitat are presented in Tables BIO-5a and BIO-5b.

### Table BIO-5a  Impacts to Riparian Habitat at Sonoma Creek Bridge

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (access road, construction area)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.084</td>
</tr>
<tr>
<td>Permanent (bridge and road footprint)</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Note: a minus (-) sign indicates a loss of habitat. A plus (+) sign indicates a gain of habitat.

<sup>a</sup> All impacts are based on preliminary design and may change. Impacts will be updated, if needed, during the permitting process.

<sup>b</sup> All areas affected by temporary impacts would be restored onsite.

### Table BIO-5b  Impacts to Riparian Habitat at Hooker Creek Bridge

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (LPSTP work area, restored bank)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.318</td>
</tr>
<tr>
<td>Permanent (guard rail)</td>
<td>0.007</td>
</tr>
</tbody>
</table>

<sup>a</sup> All impacts are based on preliminary design and may change. Impacts will be updated, if needed, during the permitting process.

<sup>b</sup> All areas affected by temporary impacts would be restored onsite.

The riparian trees impacted by the proposed project are shown on Figures BIO-4a and BIO-4b. At the Sonoma Creek Bridge project location, eight trees are anticipated to be removed, including valley oak (5) and willow species (3). At the Hooker Creek Bridge project location, 51 trees are anticipated to be removed, including: coast live oak (*Quercus agrifolia*) (24); valley oak (10); willow species (5); big-leaf maple (5); ash (*Fraxinus* spp.) (3); California buckeye (2); Blue gum (*Eucalyptus globulus*) (1); and Chokecherry (*Prunus virginiana*) (1). The vegetation types that are anticipated for potential impacts are shown on Figures BIO-5a and Figure BIO-5b.

The removal of trees at both bridge locations is necessary to: create a clear path for construction equipment and haul trucks, conduct proposed project activities, and to facilitate contour grading to restore the channel around the creeks.

The trees to be removed would be cut down to the stumps and removed approximately between September 1 and October 15, 1 year ahead of construction. No grubbing would occur during this period. Removal of non-native trees is
FIGURE BIO-4a
Potential Impacts to Trees.
Sonoma Creek Bridge
Route-12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82
Sonoma County, California

Legend
- Project Area (0.47 acre)
- Biological Study Area (1.38 acres)
- Sonoma Creek
- Permanent Impact Area
- Temporary Impact Area

Potentially Impacted Trees
Tree Species
- Valley oak
- Willow species

Scale
1 inch = 35 feet
FIGURE BIO-4b
Potential Impacts to Trees.
Hooker, Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California

Legend
- Project Area (1.06 acres)
- Biological Study Area (2.85 acres)
- Permanent Impact Area
- Temporary Impact Area

Trees in BSA (102); Trees in Project Area (51)

Tree Species
- American elm
- Ash
- Big-leaf maple
- Black oak
- Blue gum
- California buckeye
- Chokecherry
- Coast live oak
- Douglas fir
- Fremont cottonwood
- Grand fir
- Olive
- Valley oak
- Willow species

Scale
1 inch = 75 feet
FIGURE BIO-5a
Potential Impacts to Vegetation Types
Sonoma Creek Bridge

Route-12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82
Sonoma County, California

Legend
- Project Area (0.47 acre)
- Biological Study Area (1.38 acres)

Vegetation Types in BSA (1.38 acres)
- Quercus lobata Alliance (0.06 acre)
- Bare Ground (0.02 acre)
- Major Roads (0.36 acre)
- Developed (0.33 acre)
- California Annual and Perennial Grassland Macrogroup (0.07 acre)
- Vineyard (0.02 acre)

Permanent Impacts to Vegetation Types
- California Annual and Perennial Grassland Macrogroup (0.003 acre)
- Quercus lobata Alliance (0.012 acre)
- Bare Ground (<0.001 acre)
- Developed (0.021 acre)

Temporary Impacts to Vegetation Types
- California Annual and Perennial Grassland Macrogroup (0.013 acre)
- Quercus lobata Alliance (0.122 acre)
- Bare Ground (0.008 acre)
- Developed (0.027 acre)

Scale
1 inch = 35 feet

0 35 70 Feet
FIGURE BIO-5b
Potential Impacts to Vegetation Types, Hooker Creek Bridge
State Route 12 Bridge Scour Mitigation Project
EA 04-4H050, SR 12, Post Mile 25.82, 33.31
Sonoma County, California

Legend
- Project Area (1.06 acres)
- Biological Study Area (2.85 acres)
- Hooker Creek
- Vegetation Types in BSA (2.85 acres)
  - Quercus (agrifolia, douglasii, garryana, kelloggii, lobata, wislizenii) Alliance (0.86 acre)
  - Major Roads (0.66 acre)
  - Vancouverian Riparian Deciduous Forest Group (0.59 acre)
  - California Annual and Perennial Grassland Macrogroup (0.12 acre)
  - Vineyard (0.31 acre)
  - Forest Sliver (0.09 acre)
  - Developed (0.02 acre)
- Permanent Impacts to Vegetation Types
  - Forest Sliver (0.001 acre)
  - Quercus (agrifolia, douglasii, garryana, kelloggii, lobata, wislizenii) Alliance (0.024 acre)
  - Vancouverian Riparian Deciduous Forest Group (0.018 acre)
- Temporary Impacts to Vegetation Types
  - California Annual and Perennial Grassland Macrogroup (0.014 acre)
  - Forest Sliver (0.004 acre)
  - Quercus (agrifolia, douglasii, garryana, kelloggii, lobata, wislizenii) Alliance (0.175 acre)
  - Vancouverian Riparian Deciduous Forest Group (0.270 acre)
  - Vineyard (0.040 acre)

Scale
1 inch = 75 feet

1 inch = 75 feet
considered beneficial to the creek habitats. Trees would be replaced at a 1:1 ratio, or as determined by local tree protection policies or ordinances and biological permits. Project Feature AES-3 includes measures that address tree removal.

Caltrans has determined that impacts to riparian habitat would be less than significant with the restoration of creek banks and adjacent upland areas.

**c) Less than Significant**

There are no federally protected wetlands, as defined by section 404 of the Clean Water Act. However, the project would temporarily impact waters protected under USACE, RWQCB, and CDFW regulations due to proposed construction activities.

Figures BIO-1a and BIO-1b, and Tables BIO-6a and BIO-6b display the potential impacts to waters of the U.S. Project aspects creating temporary impacts include the temporary access road, access to the creek bed by heavy machinery below OHWM and creek bed contouring, as well as access needed for shoulder widening in the upland area (Figure BIO-1b).

**Table BIO-6a  Impacts to Potential Waters of the U.S. and State at Sonoma Creek Bridge**

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (creek diversion and access road)b</td>
<td>-0.022</td>
</tr>
<tr>
<td>Permanent (removal of existing bridge pier)</td>
<td>+0.0004</td>
</tr>
</tbody>
</table>

Note: a minus (-) sign indicates a loss of habitat. A plus (+) sign indicates a gain of habitat.

a All impacts are based on preliminary design and may change. Impacts will be updated, if needed, during the permitting process.

b All areas affected by temporary impacts would be restored onsite.

**Table BIO-6b  Impacts to Potential Waters of the U.S. and State at Hooker Creek Bridge**

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Area (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary (creek diversion and access road)b</td>
<td>0.012</td>
</tr>
<tr>
<td>Permanent (LPSTP, removal of existing bridge)</td>
<td>0.008</td>
</tr>
</tbody>
</table>

a All impacts are based on preliminary design and may change. Impacts will be updated, if needed, during the permitting process.

b All areas affected by temporary impacts would be restored onsite.
Chapter 3 Proposed Mitigated Negative Declaration and CEQA Environmental Checklist

The proposed project at Hooker Creek Bridge is anticipated to permanently impact potentially jurisdictional water features covered under USACE resulting from the LPSTP work area. At both proposed project sites, fill would be permanently removed from the creek bed, creating better creek habitat and wildlife corridors.

Grading, clearing, and grubbing of upland areas could result in indirect, temporary impacts from increased erosion and sedimentation, and could adversely impact water quality. These indirect impacts would be avoided during construction through implementation of the Caltrans standard erosion and sediment control BMPs (Project Feature BIO-4), such as the use of silt fences or fiber rolls. In addition, implementation of hydroseeding and planting wetland and riparian vegetation following ground-disturbing activities would reduce erosion and sedimentation on water features from the upland areas after construction (Project Feature BIO-8).

Compensatory mitigation is not proposed because the project has an overall positive effect on waters features. The implementation of the proposed project would result in a long-term improvement of the flow regime within the Hooker Creek by providing stabilization to the north-east bank. With the completion of the project’s restoration measures and BMPs, the impact on water features and aquatic habitat would be less than significant.

d) Less than Significant

The installation of a creek diversion structure would allow for unimpeded movement of fish, if water is present, and other wildlife species during construction. Relocation of fish and other aquatic organisms would avoid or minimize potential stranding of animals during dewatering operations. Overall, the project would have beneficial, long-term impacts on fish migration because it would restore the scour-critical bridges and their banks to a more stable habitat (with less erosion and sedimentation), and as well as provide improved migration corridors for fish and more space for wildlife movement under the bridges, thereby resulting in a less-than-significant impact.

e) Less than Significant

The proposed project would not conflict with local policies or ordinances protecting trees.
The preservation policy or ordinances that provide protections to trees in Sonoma County include the Sonoma County General Plan 2020 and Article 67, Valley Oak Habitat (VOH) Combining District. The Sonoma County General Plan 2020 was adopted in 2008. It increased protections for riparian corridors in the county of Sonoma. In November 2014, zoning code changes were implemented to the stream protection policies and rezoned properties to add the Riparian Corridor Combining Zone to all designated streams shown on the General Plan Open Space maps. Both project locations are in the Riparian Corridor District Planning Area 9: Sonoma Valley (County of Sonoma 2018).

Article 67, Valley Oak Habitat (VOH) Combining District, protects and enhances valley oaks and valley woodlands in the county of Sonoma. There are two valley oaks in the Sonoma Creek Bridge BSA that could require mitigation to meet the requirements identified in Article 67. There are nine valley oak trees at the Hooker Creek location that could potentially meet the mitigation requirements identified in Article 67. The proposed project is subject to design review and approval of tree removal within the Valley Oak Habitat District.

Article 88 of the Sonoma County Zoning Code contains a Tree Protection Ordinance that outlines tree protection measures. Sonoma County considers the valley oak (Quercus lobata) to have special consideration because of its importance as a feature to the landscape. Valley oaks and those proposed for removal are shown on Figures BIO-5a and BIO-5b.

The project would follow all local tree ordinance policies and obtain permits for the removal of trees located outside of Caltrans ROW.

f) No Impact

The proposed project does not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Both project locations are in the Area 9 Sonoma Valley, Riparian Corridor Combining District Planning area. There is no impact.

**Project Features**

Caltrans would incorporate its standard measures into the project to offset or avoid potential impacts to biological resources. These features include those described in the following paragraphs.
**Project Feature BIO-1. Seasonal Avoidance.** To the extent practicable, construction will not occur during the wet season. Except for limited vegetation clearing (necessary to minimize effects to nesting birds), work within the creek will be limited to the period from June 15 to October 15.

**Project Feature BIO-2: Environmentally Sensitive Area (ESA) Fencing.** Before starting construction, ESAs (defined as areas containing sensitive habitats, adjacent to or within construction work areas, for which physical disturbance is not allowed) will be clearly delineated using temporary, high-visibility, orange fencing. The ESA fencing will remain in place throughout the project duration and prevent construction equipment or personnel from entering sensitive habitat areas. The final project plans will depict the locations where ESA fencing will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs.

**Project Feature BIO-3: Dewatering.** Dewatering and discharging activities will be conducted according to standard Caltrans requirements, as follows:

a. The dewatering plan will be submitted to USFWS for review and approval in advance of its implementation.

b. The USFWS-approved biologist will be present during dewatering activities to relocate listed species as needed.

c. Upon completion of construction, any barrier to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

d. If dewatering system requires pumping, all intakes will be completely screened with wire mesh not larger than 5 millimeters, to prevent aquatic vertebrates, including CRLF and/or CCCS, from entering pump system.

e. Dewatering would be used between June 15 and Oct 15 to prepare for in-creek work.

**Project Feature BIO-4: Implementation of BMPs.** In accordance with RWQCB requirements, a stormwater pollution prevention plan (SWPPP) will be developed, and erosion control BMPs will be implemented to minimize wind- or water-related erosion. The Caltrans *Construction Site Best Management Practice (BMP) Manual*
(Caltrans 2017d) 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 will include:

a. Disallowing discharging of pollutants from vehicle and equipment cleaning into storm drains or watercourses

b. Keeping vehicle and equipment fueling and maintenance operations at least 50 feet away from watercourses, except at established commercial gas stations or an established vehicle maintenance facility

c. Collecting and disposing of concrete wastes and water from curing operations in appropriate washouts, located at least 50 feet from watercourses

d. Maintaining spill containment kits onsite at all times during construction operations and/or fueling of equipment

e. Using water trucks and dust palliatives to control dust in unvegetated areas, and covering temporary stockpiles when weather conditions require

f. Installing coir rolls or straw wattles along or at the base of slopes during construction to capture sediment

g. Protecting graded areas from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting (jute or coir) as appropriate on sloped areas

h. 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

Project Feature BIO-5: Construction Site Management Practices. The following site restrictions will be implemented to avoid or minimize potential effects on listed species and their habitats:

a. Enforce a speed limit of 15 mph in the project footprint, in unpaved and paved areas, to reduce dust and excessive soil disturbance.

b. Locate construction access, staging, storage, and parking areas within the project ROW outside any designated ESA or outside the ROW in areas environmentally cleared and permitted by the contractor. The following areas will be limited to the
minimum necessary to construct the proposed project: access routes, staging and storage areas, and contractor parking. Routes and boundaries of roadwork will be clearly marked before initiating construction or grading.

c. Certify, to the maximum extent practicable, borrow material is nontoxic and free of weeds.

d. Enclose food and food-related trash items in sealed trash containers, and remove them from the site at the end of each day.

e. Prohibit pets from entering the project footprint area during construction.

f. Prohibit firearms within the project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

g. Maintain equipment to prevent the leakage of vehicle fluids, such as gasoline, oils, or solvents, and develop a spill response plan. Hazardous materials, such as fuels, oils, solvents, and similar materials, will be stored in sealable containers, in a designated location that is at least 50 feet from aquatic habitats.

h. Service vehicles and construction equipment, including fueling, cleaning, and maintenance equipment, at least 50 feet from aquatic habitat, unless separated by topographic or drainage barrier.

i. Avoid nighttime work for activities that are practicable to be done during the day. For work that needs to be conducted during the night, direct all lighting downward and toward the active construction work area.

**Project Feature BIO-6: Avoidance of Entrapment.** To prevent inadvertent entrapment of animals during construction, excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day using plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals. Replacement pipes, culverts, or similar structures stored in the project area overnight will be inspected before they are subsequently moved, capped, and/or buried.

**Project Feature BIO-7: Vegetation Removal.** Vegetation that is within the cut-and-fill line, or growing in locations where permanent structures will be placed (such as road alignment, shoulder widening, or bridge abutments), will be cleared. Vegetation
will be cleared only where necessary and will be cut above soil level, except in areas that will be excavated. This will allow plants that reproduce vegetatively to resprout after construction. Clearing and grubbing of woody vegetation will occur by hand or using construction equipment, such as mowers, backhoes, and excavators. If clearing and grubbing, or tree removal, occur between February 1 and September 30, a qualified biologist will survey for nesting birds within the areas to be disturbed, including a perimeter buffer of 50 feet for passerines and 300 feet for raptors, before clearing activities are to begin. All nest avoidance requirements of the Migratory Bird Treaty Act and California Fish and Game Code will be observed (including establishing appropriate protection buffers around active nests until young have fledged). Cleared vegetation will be removed from the project footprint to prevent attracting animals to the project site.

**Project Feature BIO-8: Replant, Reseed, and Restore Disturbed Areas.** Caltrans will restore temporarily disturbed areas to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses and shrubs to stabilize ground and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition.

**Project Feature BIO-9: Reduce Spread of Invasive Species.** Caltrans will comply with Executive Order 13112 to reduce the spread of invasive species. The contractor will be required to contain the plant material associated with noxious weeds and dispose of it in a manner that will not promote the spread of the species. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the project area will be covered to the extent practicable with heavy, black, plastic, solarization material until the end of the project.

**Project Feature BIO-10: Proper Use of Erosion Control Devices.** To prevent animals, including CRLF and/or FYLF, from becoming entangled or trapped in erosion control materials, plastic monofilament netting (that is, erosion control matting) or similar material will not be used within the project area. Acceptable substitutes will include coconut coir matting or tackifier hydroseeding compounds.

**CRLF AMMs**

**AMM BIO-1: Worker Environmental Awareness Training.** Before beginning construction activities, a qualified biologist will conduct an education program for all project construction personnel. At a minimum, the training will include: a description
of CRLF, CCCS, and other listed species, as well as migratory birds and their habitats; a discussion of the potential occurrence of these species within the project area; an explanation of the status of these species and protection; a description of measures to be implemented to conserve listed species and their habitats as they relate to the work site; and a description of boundaries within which construction may occur. Upon completion of the training program, construction personnel will sign a form stating they attended the program and understand all the AMMs and regulatory implications. A factsheet conveying this information will be prepared and distributed to the construction and project personnel entering the project footprint area.

**AMM BIO-2: Wildlife Exclusion Fencing (WEF).** Before starting construction, WEF will be installed along the project footprint perimeter in the areas where listed wildlife could enter the project site. Locations of the WEF will be determined in coordination with the appropriate regulatory agencies. The final project plans will depict the locations where WEF fencing will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF fencing material, and proper WEF installation and maintenance. The WEF will remain in place throughout the project duration, be regularly inspected for stranded animals, and be fully maintained. At some locations, WEF will be installed during each construction phase and removed when that phase is completed.

**AMM BIO-3: Preconstruction Surveys.** A USFWS-approved biologist will conduct preconstruction CRLF surveys no more than 20 calendar days prior to any initial ground disturbance and immediately prior to ground disturbance. Suitable aquatic and upland habitat within the project footprint (Figures BIO-2a and BIO-2b), including refugia habitat, such as under shrubs, downed logs, small woody debris, or mammal burrows will be thoroughly inspected. If a CRLF is observed, the individual will be evaluated and relocated in accordance with the observation and handling protocol described in AMM BIO-5. If safe, the biologist will investigate areas of disturbed soil for signs of CRLF within 30 minutes of initial disturbance.

**AMM BIO-4: Biological Monitoring.** The USFWS-approved biologist will be present during construction activities where harm to a listed species could occur such as during ground disturbing activities. Through communication with the resident engineer or his/her designee, the USFWS-approved biologist may stop work if deemed necessary for any reason to protect listed species and will advise the resident engineer or designee on how to proceed accordingly.
AMM BIO-5: Protocol for Species Observation. If CRLF are encountered in the project footprint, work within 50 feet of the animal will cease immediately until the animal leaves the construction zone or is removed by the USFWS-approved biologist. The Resident Engineer and the USFWS-approved biologist will be notified immediately of CRLF discoveries and will then notify the USFWS. Based on the professional judgment of the approved biologist, if project activities can be conducted without harming or injuring the animal(s), the animals may be left at the location of discovery and monitored by the approved biologist. 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. The USFWS-approved biologist will release captured CRLF within appropriate habitat in the riparian corridor, but outside of the construction zone.

AMM BIO-6: Cover Boards. The USFWS-approved biologist will ensure that cover boards are placed in strategic locations throughout the project footprint during the preconstruction surveys. These cover boards will be checked for CRLF daily during construction when the USFWS-approved biologist is onsite.

CCCS AMMs
AMM BIO-7: Construction in the creek is scheduled during the summer and fall, when the creek will be dry to mostly dry (June 15 to October 15). Conducting work within the proposed in-water work window will minimize the likelihood of potential mortality.

AMM BIO-8: Prior to dewatering within a coffer dam or sheet piling installation, fish and other aquatic vertebrates within the area to be dewatered will be removed and relocated to appropriate areas out of the construction area. An approved fish removal and relocation plan will be developed, and approved by the CDFW and NMFS, prior to fish recovery operations per the PBO. After completion of the proposed project, all materials used to maintain flow and divert water from the work area during the construction period, including any cofferdams, pipe, filter fabric, and gravel, will be removed from the streambed. All excess soil will be disposed of at an approved upland site.

MITIGATION MEASURE
Mitigation Measure BIO-1: Impacts to special-species habitat will be mitigated through the restoration of the creek bed, following the removal of the existing Sonoma Creek Bridge, as well as the restoration of the creek bed and banks at the Hooker Creek Bridge location after removal of the old bridge structure and gravel
bar. Both existing bridges will be replaced with single-span structures creating an opportunity for habitat improvement. In addition to addressing the currently eroding creek habitat, the Hooker Creek part of the project will restore about 0.003 acre of creek bank, while about 0.0004 acre of creek bed will be restored at Sonoma Creek. The restored habitat will provide improved bank stability and habitat connectivity for CRLF and CCCS.
| V. CULTURAL RESOURCES:  
Would the project: | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less-Than-Significant Impact | No Impact |
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<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</td>
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<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</td>
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<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
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<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
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Caltrans prepared a memorandum titled, *Final Cultural Resources Compliance for the Proposed State Route 12 Bridge Scour Project, Sonoma County* (Caltrans 2017e). A summary of the findings of this review is presented herein.

The Architectural and Archeological areas of potential effects (APEs) were established to include all locations where construction activities would take place. It includes the project area (footprint) for the new bridge structures, construction method impacts, temporary construction easements, permanent acquisitions, staging, and utility relocation. The vertical APE consists of all activities that would impact the project area below the current ground surface, including excavation, drilling or augering, regrading, removal of old bridge elements, drainage construction, dewatering, and tree and vegetation removal.

**a-b) No Impact**

A Historic Property Survey Report, Archaeological Survey Report, and Extended Phase I Investigation were prepared for the proposed project (Caltrans 2017f, 2017g, 2017h).

It has been determined that no historical resources are within the project area limits, as outlined in CEQA Guidelines 15064.5(a). No archaeological resources or historic properties were identified within the APE for this project.
c) No Impact

Both the Sonoma Creek and Hooker Creek Bridge sites are founded on Holocene stream deposits that have a low paleontological sensitivity. The standard specification 14-7, Paleontological Resources, would apply to any unanticipated find (Caltrans 2017i, 2017j).

Based on the low paleontological sensitivity of associated geologic units, and the excavation parameters, it is anticipated that the proposed project would not disturb any paleontologically sensitive resources. Therefore, no impact to paleontological or unique geologic resources would occur (Caltrans 2017i, 2017j).

d) Less than Significant

While no archaeological resources have been identified, discovery of unknown cultural resources could occur during excavation. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If archaeological materials are discovered Project Feature CULT-1, Discovery of archaeological materials, would be implemented. If human remains are discovered Project Feature CULT-2, Discovery of human remains, would be implemented.

**Project Feature CULT-1. Discovery of archaeological materials.** If archaeological materials are discovered within or near construction limits, do not disturb the resources and immediately: stop all work within a 60-foot radius of the discovery; secure the area; and notify the Office of Cultural Resources. Caltrans would investigate the discovery. Do not move archaeological resources or take them from the job site. Do not resume work within the radius of discovery until authorized. If ordered, furnish resources to assist in the investigation or recovery of archaeological resources.

**Project Feature CULT-2. Discovery of human remains.** If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities will stop in any area or nearby area that is suspected to overlie remains, and the County Coroner will be contacted. If the coroner thinks the remains are Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to Public Resources Code, Section 5097.98, will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact Caltrans District 4 so that they may work with the Most
Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.
VI. GEOLOGY AND SOILS:
Would the project:

   a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
      i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
         - Significant
         - Unavoidable Impact
         - Less Than Significant with Mitigation Incorporated
         - Less Than Significant Impact
         - No Impact
   
   b) Result in substantial soil erosion or the loss of topsoil?

   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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

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

   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?

Caltrans prepared Geotechnical Reports (Caltrans 2016 and 2017k) for the proposed project. The findings of the reports are presented herein.

GEOLOGIC AND SOIL SETTING
The project area is located in Sonoma County, in the northern Coast Range province that is characterized by northwest-trending ridges, gently sloping hills, and intervening valleys and large, elongated depressions.

The Sonoma Creek project area is covered by Holocene and late Pleistocene Alluvial fan deposits, and late Holocene Younger alluvium. The Alluvial fan deposits are poorly sorted, moderately bedded to poorly bedded sand, gravel, silt, and clay.
deposited in gently sloping alluvial fans. The Younger alluvium is loose sand, gravel, silt, and clay, deposited in active depositional environments.

The Sonoma Creek project site is covered by Hair clay loam, 0 to 2 percent slopes. The Hooker Creek project site is covered by Red Hill clay loam, 2 to 15 percent slopes.

The Hooker Creek project area is covered by surficial deposits, as follows: alluvial fan deposits of Holocene age surrounded by alluvium of late and early Pleistocene to the north and northeast, and basin deposits of Holocene age to the east. The project area contains the Glen Ellen Formation of clear Lake Volcanics and Sonoma Volcanics.

**SEISMICITY AND LIQUEFACTION**

The Sonoma Creek Bridge project site is located 0.6 mile east of the West Napa Fault, 7 miles southwest of the Green Valley Fault, 12.4 miles west of the Green Valley Fault, and 12.4 mile east of the Rodgers Creek Fault. No active faults cross the Sonoma Creek Bridge project site. Per the Ground Shaking Intensity Map of the Association of Bay Area Government (Caltrans 2016), the project area is classified as “very strong.” Per the Liquefaction Susceptibility Map of the Association of Bay Area Government, the Sonoma Creek Bridge project area is classified as “very high susceptibility” (Caltrans 2016).

The Hooker Creek Bridge project site is located 5.3 miles east of the Rodgers Creek Fault, 8.1 miles west of the West Napa Fault, 16.2 miles southeast of the Maacama Fault (south section), and 25.4 miles east of the San Andrea Fault. No active faults cross the Hooker Creek Bridge project site. Per the Ground Shaking Intensity Map of the Association of Bay Area Government, the project area is classified as “strong.” According to the U.S. Geological Survey Bay Area liquefaction map, liquefaction susceptibility is very high around the creek and moderate in the Hooker Creek project area in general (Caltrans 2017k).

**DISCUSSION**

a) i). No Impact

Surface Fault Rupture

The project area is not within a delineated Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2017). No active faults cross either the
Sonoma Creek Bridge or Hooker Creek Bridge project sites. Therefore, the project is not susceptible to fault movements within the project footprint.

ii, iii). Less than Significant

Strong Seismic Ground Shaking

Both the Sonoma Creek Bridge and Hooker Creek Bridge sites are located in proximity to several faults and are in areas classified as “very strong” and “strong”, per ground shaking intensity maps.

Seismically Induced Ground Failure, Including Liquefaction, Settlement, and Lateral Spreading

Due to the presence of liquefiable soils at both the Sonoma Creek Bridge and Hooker Creek Bridge sites, there is a potential for seismic-related ground settlement and lateral spreading. Structures are designed using Caltrans Seismic Design Criteria, which provide the minimum seismic requirements for highway bridges designed in California. The proposed project would not expose people to injury or harm. A bridge’s category and classification would determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. A final foundations report would outline the required design measures to reduce the risks from liquefaction, settlement, and lateral spreading. Therefore, no impact would occur.

iv). No Impact

The project area is relatively flat, and thus, the potential for a seismic-induced landslide is low. There would be no impact.

b) Less than Significant

At both the Sonoma Creek Bridge and Hooker Creek Bridge project sites, excavation would be needed to remove existing and construct new bridge abutments; there would be minor excavation and some embankment fill adjacent to the roadway widenings. Earth-moving activities have the potential to cause soil erosion or loss of topsoil. Temporary construction site BMPs, such as silt fence, fiber roll, drainage inlet protection, concrete wash-out, street sweeping, and construction entrance, would be deployed for sediment control and material management. Therefore, the impact would be less than significant.
c,d) Less than Significant

The project would be constructed to meet Caltrans seismic and safety standards, which would reduce the risk from unstable soils to people and structures. Therefore, there would be a less-than-significant impact.

e) No Impact

The project would not use a septic tank or alternative wastewater disposal system. Therefore, there would be no impact.
VII. GREENHOUSE GAS EMISSIONS:
Would the project:

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

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

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including: carbon dioxide (CO₂); methane (CH₄); nitrous oxide (N₂O); tetrafluoromethane; hexafluoroethane; sulfur hexafluoride (SF₆); fluoroform (HFC-23); s, s, s, 2-tetrafluoroethane (HFC-134a); and difluoroethane (HFC-152a).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation (Cal/EPA 2016). In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions (Cal/EPA 2017) The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: (1) GHG mitigation; and (2) adaptation. GHG mitigation is a term for reducing GHG emissions to reduce or mitigate the impacts of climate change. Adaptation refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).
REGULATORY SETTING

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

Federal

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

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

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA, therefore, supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (U.S. DOT 2017a). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—known as “the triple bottom line of sustainability” (U.S. DOT 2017b). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process would assist in decision-making and improve efficiency at the program level, and would inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. These efforts are detailed in the following paragraphs.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable
energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets, beginning in fiscal year 1993. The primary goal of the program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.


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

**Executive Order (EO) 13514, Federal Leadership in Environmental, Energy, and Economic Performance, 74 Federal Register 52117 (October 8, 2009):** This federal EO sets sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

**EO 13693, Planning for Federal Sustainability in the Next Decade, 80 Federal Register 15869 (March 2015):** This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous EOs to ensure agency operations and facilities prepare for impacts of climate change. This order revokes EO 13514.

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

EPA, in conjunction with the National Highway Traffic Safety Administration (NHTSA), issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010 (Center for Climate and Energy Solutions 2017) and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule, which increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond, to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rule’s long timeframe, a mid-term evaluation is included in the rule. The mid-term evaluation is the overarching process by which NHTSA, EPA, and the CARB would decide on Corporate Average Fuel Economy program and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for these model years. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target (National Archives and Records Administration 2017).

NHTSA and EPA issued a Final Rule for Phase 2 for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards would save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

**State**

With the passage of legislation, including State Senate bills (SBs) and Assembly bills (ABs), and EOs, California has been innovative and proactive in addressing GHG emissions and climate change.

**AB 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002:** This bill requires the CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year.

**EO S-3-05 (June 1, 2005):** The goal of this EO is to reduce California’s GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.

**AB 32, Chapter 488, 2006:** Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32, codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that CARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551[b]). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

**EO S-20-06 (October 18, 2006):** This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

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

**SB 97, Chapter 185, 2007, Greenhouse Gas Emissions:** This bill requires the Governor's Office of Planning and Research to develop recommended amendments to
the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

**SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection:** This bill requires CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a Sustainable Communities Strategy that integrates transportation, land use, and housing policies, to plan how emissions targets for its region would be achieved.

**SB 391, Chapter 585, 2009, California Transportation Plan (CTP):** This bill requires the state’s long-range transportation plan to meet California’s climate change goals under AB 32.

**EO B-16-12 (March 2012):** This EO orders state entities under the direction of the governor, including CARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

**EO B-30-15 (April 2015):** This EO establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e). Finally, it requires the California Natural Resources Agency to update the state’s climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

**SB 32, Chapter 249, 2016:** This codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

**ENVIRONMENTAL SETTING**

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required CARB to develop a scoping plan that describes the approach California would take to achieve the goal of reducing GHG
Chapter 3 Proposed Mitigated Negative Declaration and CEQA Environmental Checklist

emissions to 1990 levels by 2020. The scoping plan was first approved by CARB in 2008 and must be updated every 5 years. CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. CARB is moving forward with a discussion draft of an updated scoping plan that would reflect the 2030 target established in EO B-30-15 and SB 32.

The AB 32 scoping plan and the subsequent updates contain the main strategies California would use to reduce GHG emissions. As part of its supporting documentation for the draft scoping plan, CARB released the GHG inventory for California (Cal/EPA 2017). CARB is responsible for maintaining and updating California's GHG inventory per California Health and Safety Code Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020, if none of the foreseeable measures included in the scoping plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided on Figure GHG-1 represent a business-as-usual (BAU) scenario assuming none of the scoping plan measures are implemented. The 2020 BAU emissions estimate assists CARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO2e (IPCC 2007). The 2016 edition of the GHG emissions inventory (released June 2016) found total California emissions of 441.5 MMTCO2e, showing progress towards meeting the AB 32 goals.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (CARB 2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO2e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO2e.
Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG.2 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. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

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

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2 This approach is supported by the AEP: Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level National Environmental Policy Act Analysis, July 13, 2009).
Operational Emissions
The purpose of the proposed SR 12 Bridge Scour Mitigation project is to replace the scour-critical Sonoma Creek Bridge and Hooker Creek Bridge with structurally sound crossings of SR 12, with enhanced highway safety characteristics compared to the existing aging, nonstandard bridges. For more information on the project purpose and need, refer to Chapter 1. The improvements would not lead to increased traffic or induce growth in the vicinity to increase local GHG emissions.

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

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

Based on the available project information, construction-related CO₂ emissions were calculated using the Road Construction Emissions Model (RCEM), version 8.1.0, provided by the Sacramento Metropolitan Air Quality Management District. The estimated total amount of CO₂ construction emissions that would be produced as a result of implementing the proposed project for the Sonoma Creek Bridge and Hooker Creek Bridge replacements would be 539 tons and 1,361 tons, respectively (Caltrans 2018d).

Although the build alternatives would result in a temporary increase in CO₂ emissions, all work is required to be performed in accordance with Caltrans Standard Specification 7-1.02C, Emissions Reduction. This standard specification would require the contractor to comply with all CARB emissions reductions regulations before commencing the performance of the work, and maintain compliance throughout the duration of the contract. All construction contracts also include Caltrans Standard Specification 14-9.02, Air Pollution Control, which requires the contractor to comply with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the contract. To the extent that such
requirements reduce the emissions of GHGs (such as by restricting equipment idling time), they also help reduce construction GHG emissions.

**CEQA Conclusion**

While the project would result in a slight increase in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. Caltrans has determined that, in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project’s direct impact and its contribution on the cumulative scale to climate change; nonetheless, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

**Greenhouse Gas Reduction Strategies**

**Statewide Efforts**

In an effort to further the vision of California’s GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts) (Figure GHG-2). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are: (1) reducing today’s petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California.*
The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove CO₂ from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

**Caltrans Activities**

Caltrans continues to be involved on the Governor’s Climate Action Team as the CARB works to implement EOs S-3-05 and S-01-07, and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.
California Transportation Plan (CTP) 2040
The CTP is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California’s future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Assembly Committee on Transportation 2009) requires the CTP to meet California’s climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state’s transportation needs. While metropolitan planning organizations have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in pricing, transportation alternatives, mode shift, and operational efficiency.

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

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

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

Caltrans Director’s Policy 30 (Caltrans 2012) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.
Caltrans Activities to Address Climate Change (Caltrans 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

**Project-level GHG Reduction Strategies**

The following project features would also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

**CLIMATE CHANGE-1:** In accordance with Caltrans Standard Specification 14-9.02, the contractor must comply with all Bay Area Air Management District air-pollution-control rules, regulations, ordinances, and statutes that apply to the work performed for this project. In accordance with Caltrans Standard Specification 7-1.02C, the contractor must comply with all CARB emissions reductions regulations.

**CLIMATE CHANGE-2:** Compliance with Title 13, California Code of Regulations §2485 (Adopted by the Air Resources Board on June 15, 2008). This regulation would restrict idling of construction vehicles to no longer than 5 consecutive minutes. The contractor must comply with this regulation to reduce harmful emissions from diesel-powered construction vehicles.

**CLIMATE CHANGE-3:** To the extent that it is practicable for the project, reclaimed water may be used to reduce GHG emissions produced during construction. Currently, 30 percent of the electricity used in California is for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production.

**CLIMATE CHANGE-4:** Areas where vegetation removal has occurred would be replanted as soon as those areas are no longer needed for construction activities. The replanted trees would help remove CO₂ from the atmosphere.

**Adaptation Strategies**

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

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

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

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

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels (U.S. DOT 2017a).
State Efforts
On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high-water levels, and storm surge and storm wave data.

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

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

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

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team, of which Caltrans is a member. First published in 2010, the document provided “guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California,” specifically, “information and recommendations to enhance consistency across agencies in their development of approaches to SLR.” The March 2013 update finalizes the SLR Guidance by incorporating findings of the National Academy of Science’s 2012 final *Sea Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report); the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in in working toward identifying these risks throughout the state and would work to incorporate this information into all planning and investment decisions, as directed in EO B-30-15.

The proposed SR 12 Bridge Scour Mitigation Project is outside the coastal zone, and in an area that is not considered navigable (U.S. Coast Guard, 2017) or subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.
<table>
<thead>
<tr>
<th>VIII. HAZARDS AND HAZARDOUS MATERIALS:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>Would the project:</td>
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<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
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<td>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?</td>
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<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
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<td>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?</td>
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<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?</td>
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<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</td>
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<td>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
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<td>h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</td>
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Contaminated sites in the vicinity of the project were identified using the State Water Resources Control Board’s (SWRCB’s) GeoTracker database and the California Department of Toxic Substances Control’s (DTSC’s) EnviroStor database. There are no listed hazardous sites on either the Sonoma Creek Bridge or Hooker Creek Bridge project sites (SWRCB 2017, DTSC 2017).
Bridge surveys to test for asbestos-containing material would be conducted during the plans, specifications, and estimates phase of the project. A site investigation for hazardous substances in the soil would be conducted if necessary (Caltrans 2017l).

There are no nearby schools within 0.5 mile of either the Sonoma Creek or Hooker Creek project locations. The Graywood Ranch Airport, a private facility, is located approximately 2,800 feet (0.5 mile) northwest of the Sonoma Creek Bridge project location (AirNav.com 2017).

The Kenwood Fire Protection District (located approximately 0.8 mile southeast of the Sonoma Creek Bridge on SR 12), serves the Sonoma Creek Bridge project area; and the Sonoma Valley Fire and Rescue Authority (Station 3 is located approximately 0.9 mile southeast of the Hooker Creek Bridge on SR 12), and Glen Ellen Fire Protection District (located approximately 3.2 miles northwest in Glen Ellen) serves the Hooker Creek Bridge project area. CAL FIRE Sonoma Lake Napa Unit is located approximately 1.9 miles north of the Hooker Creek Bridge project area, on SR 12. The Sonoma County Sheriff’s Office serves the project area at both bridge sites. The project area at the Sonoma Creek Bridge is designated as being in a moderate fire hazard severity zone, and the project area at the Hooker Creek Bridge is designated as being in a moderate to very high fire hazard severity zone (CALFIRE 2017).

a, b) No Impact

Equipment, fuels, lubricants, and solvents would be stored at least 50 feet from the stream channel. In accordance with Project Feature HAZ-1, Caltrans Standard Specifications 13-3, BMPs would be implemented to prevent accidental spills into Sonoma Creek and Hooker Creek. Therefore, there would be no impact.

Project Feature HAZ-1: Specifications for preventing accidental spills. Caltrans Standard Specifications 13-3 BMPs would be implemented to prevent accidental spills into Sonoma Creek and Hooker Creek.

c, d) No Impact

There are no schools in the project vicinity. Handling of hazardous materials would be in compliance with Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste. Therefore, there would be no impact.
e) No Impact

The project is not within an airport land use plan or within 2 miles of a public airport (Sonoma County 2017). The project would not result in a safety hazard for people residing or working in the project area. Therefore, there would be no impact.

f) No Impact

The project at the Sonoma Creek Bridge location is located approximately 0.5 mile from a private airport. The project would not build any structures that could interfere in height or proximity to the air strip that would pose impacts to air navigation. The project would not result in a safety hazard for people residing or working in the project area. There would be no impact.

g) Less than Significant

During construction at the Sonoma Creek Bridge site, one lane of traffic would be carried through the work area, and traffic would be under long-term, signalized, one-way traffic control during two construction seasons (extending between June through October). There would be a need for approximately three to five short-term, overnight, roadway closures, involving detour or lane closures with flagging and one-way traffic control.

During construction at the Hooker Creek Bridge site, two lanes of traffic would be maintained through all stages of construction. There may be need for approximately four to five overnight roadway closures, involving detour or lane closures, with flagging and one-way traffic control.

Closure of SR 12 could temporarily interfere with emergency response or emergency evacuation plans in the project vicinity. A traffic management plan would be prepared. Also, a Public Information Officer would be assigned to this project during the construction phase to keep the public and public emergency services informed on the status of the project and provide information about road closures and need for use of alternate routes, to be disseminated to the public and medical or emergency providers. Therefore, the impact would be less than significant.

h) Less than Significant

The project area is designated as a moderate to very high fire hazard severity zone. The Sonoma Nuns Fire occurred in October 2017, and included both project sites.
The Kenwood Fire Protection District and the Sonoma County Fire and Emergency Services Department provide fire protection services for the project area, at Sonoma Creek Bridge and Hooker Creek Bridge sites, respectively. Caltrans would prepare a traffic management plan consistent with the guidelines in *California Manual on Uniform Traffic Control Devices*, 2014 edition (Caltrans 2014). The traffic management plan would be implemented to address vehicular and pedestrian access during construction. The plan would identify detour routes and accessibility through or around the project area for emergency and medical vehicles associated with essential services, to include emergency services in case of fire. Therefore, the impact would be less than significant.
### IX. HYDROLOGY AND WATER QUALITY:
Would the project:

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<tr>
<th></th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tr>
<td>a)</td>
<td>Violate any water quality standards or waste discharge requirements?</td>
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<td>b)</td>
<td>Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</td>
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<td>c)</td>
<td>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?</td>
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<td>d)</td>
<td>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?</td>
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</tr>
<tr>
<td>e)</td>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>f)</td>
<td>Otherwise substantially degrade water quality?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>g)</td>
<td>Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h)</td>
<td>Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>i)</td>
<td>Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>j)</td>
<td>Inundation by seiche, tsunami, or mudflow</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Caltrans prepared a water quality study (Caltrans 2017m) and a project floodplain impacts report (Caltrans 2017n) for the SR 12 Bridge Scour Mitigation Project. A summary of the findings of these analyses are presented herein.

Under the proposed project at both bridge locations, the total existing impervious area is approximately 0.57 acre. Reworked areas would be approximately 0.02 acre at the Hooker Creek site. There would be no reworked areas at the Sonoma Creek site. There would be an increase of pollutant-generating, net, new, impervious surface of approximately 0.15 acre at both bridge locations. The project would also result in an anticipated disturbed soil area (DSA) of a total 0.7 acre at both bridge locations.

a, f) Less than Significant

Runoff from the project area collects in drainage inlets and roadway side ditches, and flows through the drainage system until it discharges to Sonoma Creek and Hooker Creek and, ultimately, to San Pablo Bay.

Sonoma Creek, Calabaza Creek, and San Pablo Bay are on the 2012 303(d) list, and are impaired for diazinon, mercury, pathogens, and sedimentation/siltation. Calabaza Creek empties into Sonoma Creek near the Town of Glen Ellen. Sonoma Creek and Hooker Creek are considered high-risk waterbodies for sediment.

Potential temporary impacts to existing water quality would result from active construction areas, which could lead to the release of fluids, concrete material, construction debris, sediment, and litter beyond the perimeter of the site.

Implementation of Project Feature HYDRO-1, temporary construction site BMPs, as described below, would be used for sediment control and material management.

Project Feature HYDRO-1: Temporary construction site BMPs, such as use of silt fence, fiber roll, drainage inlet protection, concrete wash-out, street sweeping, and construction entrance would be deployed for sediment control and material management.

As described below in Project Feature HYDRO-2, a SWPPP would be completed to minimize pollution and stormwater runoff during construction. A SWPPP would be prepared by the contractor and approved by Caltrans, pursuant to Department 2015 Standard Specification 13-3. The SWPPP would address potential temporary impacts via implementation of appropriate BMPs. Therefore, impacts to water quality would be less than significant.
**Project Feature HYDRO-2:** Prior to commencement of construction activities, a SWPPP must be prepared by the Contractor and approved by Caltrans, pursuant to Department 2015 Standard Specification 13-3.

**b) Less than Significant**

The project is expected to expand impervious surface by approximately 0.15 acre. Construction and operation, however, would not deplete groundwater supplies or interfere substantially with groundwater recharge. With Project Feature HYDRO-3, implementation of permanent stormwater treatment measures, impacts to water quality would be less than significant.

**Project Feature HYDRO-3:** Implementation of permanent stormwater treatment measures would be included as a condition, equivalent to the net new impervious surface of 0.15 acre. The preferred treatment BMP type is bioretention, which may be designed as either a basin or a swale configuration.

**c) Less than Significant**

The proposed project would not substantially alter the drainage pattern of the site in a manner that would result in increased erosion and siltation. Project Feature HYDRO-3, temporary construction site BMPs, (discussed above) would be implemented for sediment control and material management.

At both the Sonoma Creek Bridge and Hooker Creek Bridge sites, roadway embankments would be widened. At the Sonoma Creek site, there would be minor excavation for the minor roadway widening (described above) and some embankment fill adjacent to the roadway widening. At the Hooker Creek site, an embankment that would be about 5 feet wider on both sides of the roadway would be constructed approximately 150 feet beyond the southern end of the bridge. In addition, at the Hooker Creek Bridge site a 45-foot-long, Type 5, retaining wall would be constructed at the northwestern abutment to avoid embankment fill placement into the creek channel.

The project would reestablish the alignment of Hooker Creek by removing a gravel bar upstream from the Hooker Creek Bridge in order to preserve the northerly creek bank and existing wing wall. LPSTP would be placed along the northerly creek bank on the upstream (east) side of the bridge to protect the bridge abutment and restore
the creek bank, because it would provide protection and stability to the creek bank and facilitate growth of vegetation.

d) **Less than Significant**

The proposed project would not substantially alter the drainage pattern of the site at either the Sonoma Creek or Hooker Creek sites in a manner that would result in an increase of flooding. At Hooker Creek, the re-establishment of the northern bank would include placing fill in the floodplain. However, this is anticipated to be balanced by the removal of the sand bar and the removal of roadway embankment to construct the larger bridge (Caltrans 2017n). Therefore, the impact would be less than significant.

Construction would require de-watering of Sonoma Creek and Hooker Creek. Implementation of Project Feature HYDRO-4, construction of a creek diversion, would provide for a dry working environment within the creek channels. De-watering would be performed by constructing cofferdams just upstream of the work limits and then conveying water through pipes during the construction season (June through October). By the end of each construction season, the creek would be restored to its original condition, and the cofferdams and pipe would be removed. Therefore, the impact would be less than significant.

**Project Feature HYDRO-4: Creek Diversion.** A creek diversion would be implemented to provide for a dry working environment within the creek channel. This can take different forms, such as gravel bag cofferdam.

e) **Less than Significant**

The project would comply with Caltrans Clean Water Act Section 402 National Pollution Discharge Elimination System general permit.

As described below, under Project Feature HYDRO-5, additional treatment for increased runoff from new impervious areas would be provided by BMPs, such as bioretention. Bioretention systems use infiltration into soil to treat stormwater runoff by filtering out sediment and contaminants before they flow into a waterbody. If the ROW is not adequate to site the preferred treatment BMPs, then an alternative compliance option (such as offsite treatment) would need to be investigated.

**Project Feature HYDRO-5:** The preferred treatment BMP type is bioretention, which may be designed as either a basin or a swale configuration. Whereas the soils
seem to provide less-than-adequate infiltration site soils may not be suitable for the required infiltration rate. As a result, soil would have to be imported for any bioretention system.

Section 401 of the Clean Water Act requires a water quality certification from either the SWRCB or RWQCB when a project would require a federal permit, resulting from a discharge to waters of the U.S. Impacts to waters of the U.S. are anticipated. Therefore, a Section 404 permit, issued by the U.S. Army Corps of Engineers, is required. A Section 401 certification, issued by the San Francisco Bay RWQCB, is also required.

To ensure compliance with Clean Water Act, Section 402, the SWRCB issued the Caltrans a statewide National Pollution Discharge Elimination System stormwater permit to regulate stormwater discharges from Caltrans facilities (Order No. 2012-0011-DWQ).

The SWRCB issued a statewide Construction General Permit (CGP) for construction activities (2009-0009-DWQ, CAS000002, as amended by 2010-0014-DWQ and 2012-0006-DWQ), which applies to stormwater discharges from land where clearing, grading, and excavation result in a DSA of 1 acre or greater. Implementation of Project Feature HYDRO-6 would stabilize soil for any tree removal and areas disturbed by the project.

**Project Feature HYDRO-6:** Prior to construction completion, soil would be stabilized for any tree removal and disturbed areas.

Construction activity resulting in a DSA of less than 1 acre is subject to the CGP, if the construction activity is part of a larger Common Plan of Development, totaling 1.0 acre or more of DSA, or if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Projects subject to the CGP require a SWPPP (see Project Feature HYDRO-2). Because there is work in Sonoma Creek and Hooker Creek, this project would require a SWPPP. In addition, per Project Feature HYDRO-7, a risk level determination is required based on sediment and receiving water risks, as described below:

**Project Feature HYDRO-7:** A risk level determination is required based on sediment and receiving water risks. Currently, the risk level has been determined to be “2”. Requirements for this are found in Attachment D of the CGP. Further, sampling and monitoring of construction site discharge point(s) would be required.
g) No Impact

The proposed project would not place housing within a flood hazard area. There would be no impact.

h) Less than Significant

The proposed project at Sonoma Creek would not place any fill in the floodplain; therefore, there would be no impact.

At Hooker Creek, the re-establishment of the northern bank would include placing fill in the floodplain. However, this is anticipated to be balanced by the removal of the sand bar and the removal of roadway embankment to construct the larger bridge. Therefore, there would be a less-than-significant impact.

i) No Impact

There are no levees or dams in the immediate vicinity of the project area. Therefore, the project would not expose people or structures to a significant risk from failure of a levee or dam. There would be no impact.

j) No Impact

The project is not in an area that could be inundated by seiche, tsunami, or mudflow. There would be no impact.

---

3 A seiche is a temporary disturbance or oscillation in the water level of a lake or partially enclosed body of water, especially one caused by changes in atmospheric pressure.
### X. LAND USE AND PLANNING:
Would the project:

<table>
<thead>
<tr>
<th></th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

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**a-b) No Impact**

This project repairs two existing bridges needed to maintain community connectivity and cohesion. No new division within the community would result from this project. The short-term closures would only occur at night and, therefore, would not hinder routine daily activities.

The proposed project complies with the stated goals of the Sonoma County General Plan (Sonoma County General Plan 2008), including goals for transportation and pedestrian access and safety. The proposed project is consistent with the Sonoma Valley Trail Feasibility Study (Sonoma County Regional Parks 2016) regarding an alignment on SR 12. Therefore, there would be no impacts.

**c) No Impact**

The proposed project does not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Both project locations are in the Area 9 Sonoma Valley, Riparian Corridor Combining District Planning area. There is no impact.
<table>
<thead>
<tr>
<th>XI. MINERAL RESOURCES:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a-b) No Impact

There are no documented mineral resources within the project limits. No impacts on mineral resources would result from the proposed project (California Department of Conservation 2017b).
<table>
<thead>
<tr>
<th>XII. NOISE:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

The surrounding land uses, adjacent to the project sites on either side of SR 12, near both the Sonoma Creek Bridge and Hooker Creek Bridge locations, are residential. Four single-family residences are located within 200 feet of the project area near the Sonoma Creek Bridge. At the Hooker Creek Bridge location, 1 single-family residence is located within 100 feet and 1 single-family residence is located within 200-feet of the project area. During construction, noise from construction activities may intermittently dominate the environment in the immediate area of construction, affecting nearby sensitive receptors (residences). Impacts to sensitive receptors and increases in noise levels would be temporary. The proposed project does not qualify as Type I, as defined under the 23 CFR 772 and the Caltrans Traffic Noise Analysis Protocol. A Type I project is defined in 23 CFR 772 as a proposed federal or federal-aid highway project, for the construction of a highway at a new location or the physical alteration of an existing highway that significantly changes either the
horizontal or vertical alignment or increases the number of through-traffic lanes. A traffic noise study is not required (Caltrans 2018b).

Construction noise can disturb migratory bird nesting and foraging activities. See more discussion under the CEQA Environmental Checklist, Section IV, Biological Resources, in the subsection concerning migratory birds.

**a, d) Less than Significant**

Noise and vibration associated with construction is controlled by Caltrans Standard Specification 14-8, Noise and Vibration; see Project Feature NOISE-1, Specifications for Controlling Noise and Vibration.

**Project Feature NOISE-1: Specification for Controlling Noise and Vibration.**

The noise associated with construction is controlled by specification section 14-8.02, Noise Control, which states noise would be controlled and monitored for work activities, and noise should not exceed 86 decibels (maximum) at 50 feet from the job site between the hours of 9:00 p.m. and 6:00 a.m. No pile driving would occur during construction of the proposed project.

In the event that the construction noise exceeds or is expected to exceed the applicable contract specifications and criteria, the following measures would be implemented to reduce the potential for noise impacts, thereby reducing construction impacts to less-than-significant levels:

- Restrict the times of overly loud construction activities to between 6:00 a.m. and 9:00 p.m. (except on holidays).

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- Locate all stationary, noise-generating, construction equipment, such as air compressors, portable power generators, or self-powered lighting systems, as far as practical from noise-sensitive receptors.

- Use quiet air compressors and other quiet equipment where such technology exists.
• As practicable, have construction equipment conform to Section 14-8.02, Noise Control, of the latest Caltrans Specifications.

**b, c) No Impact**

The project would not create a traffic noise impact. Increases in noise levels from construction activities would be temporary. No pile-driving operations would occur during construction. Following construction, noise levels would not change from existing levels. Therefore, there would be no impact.

**e) No Impact**

The project is not within an airport land use plan or within 2 miles of a public airport. The project would not expose people residing or working in the project area to excessive noise levels. Therefore, there would be no impact.

**f) No Impact**

The project at the Sonoma Creek Bridge location is located approximately 0.5 mile from a private airport. The airport is not within a Sonoma County airport land use plan. The project would not expose people residing or working in the project area to excessive noise levels from avian operations. Therefore, there would be no impact.
<table>
<thead>
<tr>
<th>XIII. POPULATION AND HOUSING:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

**a-c) No Impact**

Based on the analysis for the Community Impacts Assessment (CIA) (CH2M 2018b), the proposed bridge replacement project would not expand capacity of the existing roadway and, therefore, would not create the capability of inducing population growth directly or indirectly, or displacing existing housing or people, which would necessitate the construction of replacement housing elsewhere. The proposed project would replace the Sonoma Creek Bridge and Hooker Creek Bridge with structurally sound bridges. There would be no impact.
<table>
<thead>
<tr>
<th>XIV. PUBLIC SERVICES:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire protection?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Police protection?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Schools?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>Parks?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>Other public facilities?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

a) Less than Significant

During construction at the Sonoma Creek Bridge site, only one lane of traffic would be carried through the work area, and traffic would be under long-term, signalized, 24-hour, one-way traffic control during two construction seasons (extending between June through October). There would be a need for approximately three to five, short-term, overnight, roadway closures, involving detour or lane closures with flagging and one-way traffic control.

During construction at the Hooker Creek Bridge site, two lanes of traffic would be maintained through all construction stages. There may be need for approximately four to five overnight roadway closures, involving detour or lane closures with flagging and one-way traffic control.

A traffic management plan would be prepared, and a Public Information Officer would be assigned to this project during the construction phase to keep the public and public services informed on the status of the project, and provide information about road closures, accessibility, and the need for use of alternate routes, to be disseminated to the public and public emergency (fire, police, medical) service providers (see Table PUB-1). Therefore, the impact would be less than significant.
Table PUB-1 lists service providers that serve the project area.

### Table PUB-1  Service Providers in the Project Area

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Address</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenwood Fire Protection District</td>
<td>9045 Sonoma Highway</td>
<td><a href="http://www.kenwoodfire.com/">http://www.kenwoodfire.com/</a></td>
</tr>
<tr>
<td></td>
<td>Kenwood, CA 95452</td>
<td></td>
</tr>
<tr>
<td>Sonoma County Fire and Emergency Services</td>
<td>2300 County Center Drive,</td>
<td><a href="http://sonomacounty.ca.gov/Fire-and-Emergency-Services/">http://sonomacounty.ca.gov/Fire-and-Emergency-Services/</a></td>
</tr>
<tr>
<td>Department</td>
<td>220 B, Santa Rosa, CA 95403</td>
<td></td>
</tr>
<tr>
<td>Glen Ellen Fire Protection District</td>
<td>13445 Arnold Drive, Glen Ellen, CA 95442</td>
<td><a href="https://sonomacounty.ca.gov/Public-Safety/Fire-Departments/">https://sonomacounty.ca.gov/Public-Safety/Fire-Departments/</a></td>
</tr>
<tr>
<td>Sonoma County Sherriff's Office</td>
<td>2796 Ventura Avenue, Santa Rosa, CA 95403</td>
<td><a href="https://www.sonomasheriff.org/">https://www.sonomasheriff.org/</a></td>
</tr>
<tr>
<td>Sonoma County Office of Education</td>
<td>5340 Skylanoe Boulevard, Santa Rosa, CA 95403</td>
<td><a href="https://www.scoe.org/pub/htdocs/aboutschools.html">https://www.scoe.org/pub/htdocs/aboutschools.html</a></td>
</tr>
<tr>
<td>Sonoma County Regional Parks</td>
<td>2300 County Center Drive, Suite 120A, Santa Rosa, CA 95403</td>
<td><a href="http://parks.sonomacounty.ca.gov/">http://parks.sonomacounty.ca.gov/</a></td>
</tr>
</tbody>
</table>

The proposed project would have the potential to interfere with response times, (such as increased delays or inadequate response times) on emergency services in the area during construction at the Sonoma Creek Bridge site, and during nighttime construction at both bridge sites. Caltrans would prepare a traffic management plan consistent with the *California Manual on Uniform Traffic Control Devices*, 2014 edition, guidelines (Caltrans 2014). The traffic management plan would be implemented to address vehicular and pedestrian access during the construction phases. The plan would identify a detour route and accessibility through or around the project area for emergency and medical vehicles associated with essential services; with implementation of a traffic management plan, a less-than-significant impact would occur. No other project impacts would affect public services.
XV. RECREATION:

<table>
<thead>
<tr>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

There are no recreational facilities within the project area at either the Sonoma Creek Bridge or Hooker Creek Bridge locations (Sonoma County Regional Parks 2017). The nearest parks to the project area include Annadel State Park, Hood Mountain Regional Park, Sugarloaf Ridge State Park, Jack London State Park, and Sonoma Valley Regional Park. Sonoma Valley Regional Park is a public park located west of SR 12, approximately 5 miles south of the Sonoma Creek Bridge site and approximately 3 miles north of the Hooker Creek Bridge site (see Figure 1).

a) No Impact

The proposed project would not increase the use of any existing recreational facilities. There would be no impact.

b) No Impact

The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities. There would be no impact.
### XVI. TRANSPORTATION/TRAFFIC:

Would the project:

<table>
<thead>
<tr>
<th></th>
<th>Significant and Avoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b)</td>
<td>Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c)</td>
<td>Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d)</td>
<td>Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>e)</td>
<td>Result in inadequate emergency access?</td>
<td>[ ]</td>
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<td>f)</td>
<td>Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</td>
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</table>

**a, b, c, d, f) No Impact**

The proposed project would improve existing bridge facilities. Both the Sonoma Creek Bridge and Hooker Creek Bridge would be replaced in the same locations as the existing facilities.

The project would not conflict with an applicable plan, ordinance, or policy, establishing measures of effectiveness for the performance of the circulation system, and would not conflict with a congestion management program. The project would not result in a change in air traffic patterns or traffic levels. The project would not create a hazard due to a design feature or conflict with adopted policies, plans, or
programs regarding public transit, bicycle, or pedestrian facilities. Therefore, there would be no impacts. Bicycle and pedestrian facilities would be improved with implementation of the project by widening shoulders at both project sites, and providing an Americans with Disabilities Act-compliant sidewalk at the Sonoma Creek Bridge site.

e) Less than Significant

The proposed project would have the potential to interfere or reduce emergency response times during nighttime construction. In accordance with Project Feature TRAFFIC-1, a traffic management plan would be prepared in advance of construction. The plan would incorporate the needs and input from public service providers. It would also provide a protocol for travel through the construction site or detour routes (see Sections 2.1.2 and 2.2.2, Construction Methodology, for proposed detour routes) and notification to emergency and medical providers, in the project location, of alternate access routes during nighttime lane closures. The traffic management plan would be consistent with the guidelines in *California Manual on Uniform Traffic Control Devices*, 2014 edition (Caltrans 2014). Therefore, with implementation of Project Feature TRAFFIC-1, impacts would be less than significant.

**Project Feature TRAFFIC-1**: Traffic Management Plan. A traffic management plan would be prepared in advance of construction. The plan would provide detour routes, accessibility, and notification to emergency and medical providers, in the project location, of alternate access routes during nighttime lane closures. A public information officer would be assigned to this project during the construction phase to keep the public informed on the status of the project, and provide information about road closures, accessibility, and need for use of alternate routes, to be disseminated to the public and public emergency services.
<table>
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<tr>
<th></th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
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<tbody>
<tr>
<td>XVII. TRIBAL CULTURAL RESOURCES:</td>
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<tr>
<td>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</td>
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<tr>
<td>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</td>
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<td>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.</td>
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**a-b) No Impact**

An Historic Property Survey Report was prepared for the proposed project (Caltrans 2017f) An APE was established at the Sonoma Creek Bridge and Hooker Creek Bridge project locations. The NAHC was contacted on December 14, 2015, requesting a review of their Sacred Lands file to determine if there were known cultural resource sites within or near the APE of the proposed project. A request was resubmitted on March 29, 2016. The NAHC responded on April 11, 2016. No Native American cultural resources were reported from the Sacred Lands file records search (Caltrans 2017o).

Section 106 and AB 52 consultation was initiated on November 23, 2016. On December 14, 2016, a representative from Federated Indians of Graton Rancheria acknowledged that the project is within the Tribe’s ancestral territory, expressed that the Tribe has concerns regarding cultural resources in the project area, and requested additional information about the project. The results of this archaeological survey
report, along with the results of the Extended Phase 1 work, were shared with Federated Indians of Graton Rancheria on October 24, 2017. No response has been received from the Tribe regarding the reports. Therefore, Caltrans has concluded Section 106 and AB52 consultation. If the Tribe responds with any additional questions, comments, or concerns, or with any information regarding cultural resources in the APE, the archaeological survey report would be appended, and consultation would be re-initiated (Caltrans 2017o).
### XVIII. UTILITIES AND SERVICE SYSTEMS:

Would the project:

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tr>
<td>a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
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<tr>
<td>b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
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<tr>
<td>c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
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<tr>
<td>d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>☐</td>
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<tr>
<td>e) 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?</td>
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<tr>
<td>f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?</td>
<td>☐</td>
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<tr>
<td>g) Comply with federal, state, and local statutes and regulations related to solid waste?</td>
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**a, b, d, e) No Impact**

The proposed project would neither generate a demand for potable water, nor trigger the need for services of a wastewater treatment facility. Therefore, the project would not contribute to the exceedance of treatment requirements, or require construction of new water or wastewater treatment facilities. No water is required during the construction period or during operation; therefore, there are sufficient water supplies available. There would be no impact.
c) Less than Significant

There are no existing drainage systems on the Sonoma Creek Bridge structure. There are no drainage structures proposed for the replacement bridge. There are no drainage systems in conflict with the proposed construction.

Existing roadway drainage at the Hooker Creek Bridge occurs through drainage ditches outside of the paved roadway. As part of the proposed project, drainage ditches may need to be regraded adjacent to the widened shoulder sections. It is anticipated that the new bridge would drain as the existing does, and that water from the new bridge deck would flow past the bridge to the roadway drainage ditches and not into Hooker Creek.

f) No Impact

Construction activities would generate solid waste. The contractor would coordinate with Republic Services of Sonoma County in the City of Petaluma. Republic Services of Sonoma County operates a large central landfill (Central Disposal Site), located outside of Petaluma, as well as four smaller transfer stations. The nearest designated disposal site to the project area is the Sonoma Transfer Station (4376 Stage Gulch Road, Sonoma), located approximately 16 miles from the Sonoma Creek site and approximately 8 miles from the Hooker Creek site. The Central Disposal Site is an active permitted landfill that accepts construction/demolition waste (CalRecycle 2018). With such coordination regarding construction and demolition waste, there would be no impact.

g) No Impact

As discussed in the CEQA Environmental Checklist, Section VIII, Hazards and Hazardous Materials, disposal of hazardous waste would be in compliance with the Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste. Disposal of solid waste would be in compliance with the requirements of Sonoma County Waste Disposal or Republic Services of Sonoma County, Inc., Central Landfill. Operation of the proposed project would not generate solid waste. Construction activities would comply with solid waste statutes, and there would be no impact.
**Table**

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<tr>
<th>XIX. MANDATORY FINDINGS OF SIGNIFICANCE</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</thead>
<tbody>
<tr>
<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
<td>☐</td>
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<tr>
<td>b) Does the project have impacts that are individually limited, but cumulatively considerable? (&quot;Cumulatively considerable&quot; 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)?</td>
<td>☐</td>
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<tr>
<td>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☐</td>
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</table>

**a) Less than Significant with Mitigation Incorporated**

Impacts to CRLF and CFS habitat would be mitigated through Mitigation Measure BIO-1, the restoration of aquatic habitat resulting from restoring the creek habitat that is currently eroding at Hooker Creek Bridge. The additional width that would be provided for species to pass underneath the bridges would allow for better access and enhance the creeks as wildlife corridors. Any project impacts to the riparian area and any other waters that are proposed would be mitigated onsite once the bridges and associated structures are completed.

**b) Less than significant**

Caltrans application of Mitigation Measure BIO-1, BMPs, including the re-establishment of ditches and vegetation in kind, incorporation of project features, and incorporation of AMMs into project construction, will reduce the potential for residual impacts from this project that could contribute to cumulative impacts.
c) No Impact

There would be no impact to human beings, either directly or indirectly.
Chapter 4  Comments and Coordination

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

Caltrans consulted with the National Marine Fisheries Service (NMFS) requesting a Programmatic Biological Opinion (PBO) regarding project activities that could have the potential to affect designated critical habitat for steelhead. NMFS agreed that the proposed project may utilize the PBO from NMFS through the Caltrans Routine Maintenance and Repair Activities Program, dated October 18, 2013, provided that Caltrans submit additional design plans during the project specifications and estimates phase of the project.

Caltrans submitted a Biological Assessment to the USFWS on May 9, 2018 in order to consult on potential project affects determinations for federally listed species and habitats of concern. A Biological Opinion was returned by the USFWS on July 5, 2018. The Biological Opinion found that the proposed action:

- “May affect, and is likely to adversely affect” CRLF during construction, but due to creek improvements the project will likely benefit the species in the future.

- “May affect, but is not likely to adversely jeopardize the continuous existence of” CCCS during construction, but the creek improvements that will result from the project will benefit the species in the future.

- “Not likely to result in destruction or adverse modification” of CCCS critical habitat.

The general public was involved in the project process through solicitation of feedback on the draft environmental document during the 30-day comment period that began on April 20, 2018, and ended on May 21, 2018. Letters were sent out to all adjacent land owners, and nearby residents and businesses on April 19, 2018 and a Notice of Availability was published in the Sonoma West Times and News on April 19, 2018, and in The Press Democrat on April 20, 2018. The Initial Study (IS)/MND
was also posted by the Sonoma County Clerk’s office on its public website. Copies of the Notice of Availability published in each newspaper and an example notification letter, sent to the public and agencies, are included in Appendix E. Notification letters were mailed directly to local, state, and federal agencies, and elected officials on April 20, 2018.

A copy of the draft document was made available to the public electronically on the Caltrans website. Hard copies of the document were made available at the Sonoma County Library, the Rincon Valley Regional Library, the Sonoma Valley Regional Library, and the Caltrans District 4 Office.

A Notice of Completion was submitted to the State Clearinghouse (SCH) on April 18, 2018, and was received by the SCH on April 19, 2018. The project was assigned SCH #2018042062. The SCH subsequently distributed copies of the Draft IS/MND to agencies for comment on the document.

During the 30 day public review period that began on April 20, 2018, and ended on May 21, 2018, Caltrans received one comment letter on the Draft IS. The comment letter was submitted by Sonoma County Regional Parks. The comments in this letter are listed in the following pages and have been addressed by members of the project development team whose specialty covers the subject matter of each comment.

During the next phase of project development, Caltrans plans to submit requests to CDFW for a 1602 Lake and Streambed Alteration agreement, and a 2081 Incidental Take Permit for potential impacts to listed species with potential to appear in the project area. In addition to this, Caltrans will also submit requests for a Clean Water Act Section 404 Nationwide Permit from the U.S. Army Corps of Engineers and a Clean Water Act Section 401 Permit from the San Francisco Bay Regional Water Quality Control Board – Region 2.
Comment letter from Sonoma County Regional Parks:

May 18, 2018

Arnica McCarthy, Acting Branch Chief
California Department of Transportation
District 4
P.O. Box 23660, MS 88
Oakland, Ca 94623-0660

Re: State Route 12 Bridge Scour Mitigation Project
Initial Study with Proposed Mitigated Negative Declaration (April 2018)

Dear Arnica McCarthy:

Thank you for the opportunity to review and comment on the State Route 12 Bridge Scour Mitigation Project Initial Study with Proposed Mitigated Negative Declaration (April 2018). The project proposes to replace two existing vehicle bridges crossing Sonoma Creek and Hooker Creek along the state highway. We are providing comments on this project as it relates to Sonoma County's planned 13-mile long Sonoma Valley Trail (SVT) which follows the State Route 12 corridor. Once developed, the SVT will serve as a recreational and transportation route for pedestrians and bicyclists.

In 2013, Sonoma County received funding from the Caltrans Community-Based Transportation Planning grant to prepare a trail feasibility study that would identify a separated pathway along the Highway 12 corridor connecting Sonoma with Santa Rosa. The Final Sonoma Valley Trail Feasibility Study (SVT Study) was completed and released in February 2016. The recommended preferred and alternate trail alignments are shown in the study which can be downloaded from the following web page:
http://sonomacounty.ca.gov/Parks/Planning/Sonoma-Valley-Trail/

Page 3-96 (Land Use and Planning)
In the second paragraph, it states "The proposed project is consistent with the Sonoma Valley Trail Feasibility Study (Sonoma County Regional Parks 2016) regarding the preferred alignment for a multi-use path on the east side of SR 12." Please note that due to public right of way constraints, the Sonoma Valley Trail alignment alternates between the west and east sides of SR 12 and is not limited to the east side of SR 12.

Page 3-103 (Recreation)
The first paragraph states "There are no recreation facilities within the project area at either the Sonoma Creek Bridge or Hooker Creek Bridge locations (Sonoma County Regional Parks 2017)." Please note that there is an existing 237-acre public park (Sonoma Valley Regional Park) located directly off Highway 12 between the two bridges. The approximate distances from Sonoma Valley Regional Park to Sonoma Creek Bridge and Hooker Creek Bridge are 5 miles and 3 miles, respectively.

The inclusion of the pedestrian and bicycle improvements on the Sonoma Creek Bridge will help facilitate and improve the public's access to Sonoma Valley Regional Park and other planned parks such as Calabaza's Creek Open Space Preserve along the Highway 12 corridor. The proposed Hooker Creek Bridge is missing pedestrian and bicycle improvements which need to be included as part of the bridge replacement project.

S:\Planning\Administrative\Responsible Agency and Referral Letters\Caltrans Hwy 12 Bridge Sonoma & Hooker Creek\Caltrans tr 5-18-2015.docx

Page 1 of 2
Response to Comment 1:

Caltrans notes that the Sonoma County Regional Parks proposed alignment for the Sonoma Valley trail alternates between the west and east sides of SR 12, due to public ROW constraints. The Final IS has been revised to state “The proposed project
is consistent with the Sonoma Valley Trail Feasibility Study (Sonoma County Regional Parks 2016) regarding an alignment on SR 12.

**Response to Comment 2:**
Caltrans appreciates your comment regarding the location on the Sonoma Valley Regional Park adjacent to SR 12. The Sonoma Valley Regional Park is shown on Figure 1 as a local park, according to the legend. Figure 1 in the Final IS has been updated to include a label on the map identifying the location of Sonoma Valley Regional Park. In addition, Page 3-103 of the Final IS has been updated to include the following sentence “Sonoma Valley Regional Park is a public park located west of SR 12, approximately 5 miles south of the Sonoma Creek Bridge site and approximately 3 miles north of the Hooker Creek Bridge site.”

**Response to Comment 3:**
Caltrans acknowledges your request to include pedestrian and bicycle improvement at the Sonoma Creek Bridge site. Please see the detailed response in Response to Comment 4 regarding the requested improvements.

Caltrans acknowledges your request to include pedestrian and bicycle improvement at the Hooker Creek Bridge site. Please see the detailed response in Response to Comment 6 regarding the requested improvements.

**Response to Comment 4:**
Caltrans acknowledges the comment by Sonoma County Regional Parks requesting that the proposed 6-foot-wide sidewalk be increased to a width of 8 feet, and that construction of a Class 1 bike path be extended along SR 12 within the project limits.

The roadway on either end of the existing Sonoma Creek Bridge has two 12-foot-wide lanes with 8-foot-wide shoulders. On the bridge itself, SR 12 has two 12-foot-wide lanes with 7-foot-wide shoulders and a 4-foot-wide pedestrian sidewalk on the east (northbound) side of SR 12. The proposed bridge would provide a replacement sidewalk meeting the current ADA standard width of 6 feet. The proposed project would provide 8-foot-wide shoulders on the bridge and on the roadway within the project limits.

The Caltrans ROW, at the location of the Sonoma Creek Bridge, is constrained by adjacent private property. The proposed project at the Sonoma Creek Bridge site would be constructed within the existing Caltrans ROW. Construction of an 8-foot-wide sidewalk on the Sonoma Creek Bridge would require widening the bridge 2 feet
in addition to the current proposed design width, and would result in the roadway on either side of the bridge being widened to conform to the bridge width. Widening of the bridge an additional 2 feet would affect slopes on the roadway, resulting in additional environmental impacts. Caltrans has determined that widening the bridge and roadway to accommodate an 8-foot-wide sidewalk would also affect adjacent private property; therefore, due to ROW constraints, consideration of a pedestrian-only sidewalk meeting the ADA standard of 6-feet-wide was chosen for the proposed project.

The existing roadway on either end of the Sonoma Creek Bridge currently has 8-foot-wide shoulders and the project would maintain 8-foot-wide shoulders. ROW constraints due to adjacent private property limit consideration of a Class I bike path on the SR 12 roadway within the project limits. The proposed design would conform the roadway to the proposed widened sidewalk on the northwest quadrant and to the existing driveway on the southeast quadrant within the limits of Caltrans ROW. This would provide pavement for people to walk adjacent to SR 12. The 8-foot-wide shoulders on SR 12 within the Sonoma Creek Bridge project limits would continue to facilitate use of the shoulders for public use. The proposed 8-foot-wide shoulders could be a part of a future continuous bicycle facility on SR 12.

Caltrans will coordinate with Sonoma County Regional Parks to evaluate and consider the potential for additional pedestrian and bicycle improvements, such as widening the sidewalk to 8-feet to allow for a Class I bike path. During evaluation of additional improvements Caltrans will consider environmental impacts, property requirements, cost, and utility conflicts. A study of additional improvements would take place during the project specifications and estimates phase of the project.

Caltrans agrees to coordinate with Sonoma County Regional Parks to make available the 65 percent and 95 percent design plans, when complete.

Response to Comment 5:
Caltrans acknowledges the request by Sonoma County Regional Parks regarding installation of plantings to not interfere with Sonoma Valley Trail construction at the Sonoma Creek bridge project location. Caltrans agrees to coordinate with Sonoma County Regional Parks prior to replanting within the project limits.

Response to Comment 6:
Caltrans acknowledges the request by Sonoma County Regional Parks that an 8-foot-wide Class I bike path and 2-foot-wide guardrail be included on the west side of the
proposed Hooker Creek Bridge, and that a Class I bike path be extended along SR 12 within the project limits.

On the existing Hooker Creek Bridge, SR 12 has two 12-foot-wide lanes with 6-foot-wide unpaved (dirt) shoulders. The existing roadway on either side of the Hooker Creek Bridge has two 12-foot-wide lanes with 8-foot-wide shoulders. The project proposes 8-foot-wide shoulders on either side of the bridge and roadway on SR 12 within the Hooker Creek project limits. SR 12 at the existing Hooker Creek Bridge has a posted speed limit of 50 mph.

Construction of a Class I bike path on the Hooker Creek Bridge and roadway would require widening the bridge approximately 10 feet (2-foot railing and 8-foot path) in addition to the current proposed design width. Widening the bridge an additional 10 feet is not feasible due to several constraints. Constraints include the limited Caltrans ROW, the location of residential properties adjacent to the SR 12 roadway, roadway requirements due to the posted speed limit of 50 mph, and potential significant environmental impacts. Widening the bridge and roadway would result in additional property acquisition, and could result in full acquisition of a residential property. As a result of these constraints, it is not feasible for Caltrans to construct a Class I bike path at the Hooker Creek Bridge location.

The existing roadway on either end of the bridge currently has 8-foot-wide shoulders. The proposed 8-foot-wide shoulders on the Hooker Creek Bridge, and within the project limits, would facilitate use of the shoulders for public use. The proposed 8-foot-wide shoulders could be a part of a future continuous bicycle facility on SR 12.

Caltrans agrees to coordinate with Sonoma County Regional Parks to make available the 65 percent and 95 percent design plans, when complete.

Response to Comment 7:
Caltrans acknowledges the Sonoma County Regional Parks request to not include restrictive language in agreements with landowners regarding public access in easement areas.

The project would not require temporary or permanent easements or permanent right-of-way acquisition at the Sonoma Creek Bridge site. At the Hooker Creek Bridge site, temporary construction easements and permanent right-of-way acquisition would be required as part of the proposed project. Figure 3 has been clarified to show areas of proposed permanent acquisition. Please note that Caltrans does not typically restrict
public access following property that has been acquired, and this project does not propose to restrict public access.

**Response to Comment 8:**
Caltrans acknowledges the request by Sonoma County Regional Parks regarding installation of plantings as not interfering with Sonoma Valley Trail construction on the west side of SR 12 at the Hooker Creek Bridge project location. Caltrans agrees to coordinate with Sonoma County Regional Parks prior to replanting within the project limits, and appreciates the offer by the County to work with Caltrans regarding potential tree mitigation sites.
Chapter 5 References


__________.2013. Caltrans Activities to Address Climate Change. April.

Chapter 5 References


__________. 2017g. Archaeological Survey Report for State Route 12 Bridge Scour Project, Sonoma County, California. October.

__________. 2017h. Extended Phase 1 Report for the State Route 12 Bridge Scour Project, Sonoma County, California. October.

__________. 2017i. Email communication from Caltrans District 4 Office of Geotechnical Design-West to Julie Petersen/CH2M on March 9, 2017.


______. 2017m. *Water Quality Study for the Bridge Scour Mitigation Project.*


______. 2017o. Caltrans District 4 Office of Cultural Resource Studies. Personal communication (email) with Julie Petersen, CH2M. November 30.


______. 2018c. *Natural Environment Study State Route 12 Bridge Scour Mitigation Project.* April.


______. 2017. California Greenhouse Gas Emission Inventory. [https://www.arb.ca.gov/cc/inventory/data/data.htm](https://www.arb.ca.gov/cc/inventory/data/data.htm).


Garcia and Associates (GANDA). 2017. SR-12 Bridge Scour Mitigation (Hooker Creek and Sonoma Creek Site) Tree Survey. November.


U.S. Coast Guard. 2017. Letter from U.S. Coast Guard to Caltrans regarding Coast Guard jurisdictional determination. June 29.


Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, CA.
Chapter 6  List of Preparers

The primary people responsible for contributing to, preparing, and reviewing this report are listed in Table 2.

Table 2  List of Preparers and Reviewers

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lilian Acorda, Caltrans</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Chris Archer, CH2M</td>
<td>GIS</td>
</tr>
<tr>
<td>Holly Barbare, CH2M</td>
<td>Biologist</td>
</tr>
<tr>
<td>Douglas Bright, Caltrans</td>
<td>Architectural Historian</td>
</tr>
<tr>
<td>Alden Chalk, Caltrans</td>
<td>Right-of-Way</td>
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<tr>
<td>Rachel Cotroneo, CH2M</td>
<td>Biologist</td>
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<tr>
<td>Sara Dabily, Caltrans</td>
<td>Water Quality</td>
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<tr>
<td>Sergio Damian, Caltrans</td>
<td>Structural Engineer</td>
</tr>
<tr>
<td>Eric DeNardo, Caltrans</td>
<td>Branch Chief Environmental</td>
</tr>
<tr>
<td>Clarice Ericsson, CH2M</td>
<td>Publishing Technician</td>
</tr>
<tr>
<td>Natalie Escoffier, CH2M</td>
<td>Environmental Planner</td>
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<tr>
<td>Jen Gagnon, Caltrans</td>
<td>Biologist</td>
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<tr>
<td>Evelyn Gestuvo, Caltrans</td>
<td>Traffic/Highway Operations</td>
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<tr>
<td>Norman Gonsalves, Caltrans</td>
<td>Water Quality</td>
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<tr>
<td>Minh Ha, Caltrans</td>
<td>Structural Engineer</td>
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<tr>
<td>Rowena Hollis, Caltrans</td>
<td>Noise/Air Quality</td>
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<tr>
<td>Melanie Hunt, Caltrans</td>
<td>Associate Environmental Planner</td>
</tr>
<tr>
<td>Jodi Ketelsen, CH2M</td>
<td>Senior Environmental Planner</td>
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<tr>
<td>Kevin Krewson, Caltrans</td>
<td>Noise/Air Quality</td>
</tr>
<tr>
<td>Rene Langis, CH2M</td>
<td>Senior Biologist</td>
</tr>
<tr>
<td>Jonathan Lee, Caltrans</td>
<td>Principal Engineer</td>
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<tr>
<td>Khai Leong, Caltrans</td>
<td>Hydrology</td>
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<tr>
<td>Susan Lindsay, Caltrans</td>
<td>Landscape Architecture</td>
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<tr>
<td>Amica MacCarthy, Caltrans</td>
<td>Acting Branch Chief Environmental</td>
</tr>
<tr>
<td>Mia Marek, CH2M</td>
<td>Biologist/Senior Reviewer</td>
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<tr>
<td>Loretta Meyer, CH2M</td>
<td>Senior Reviewer</td>
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<tr>
<td>Rifaat Nashed, Caltrans</td>
<td>Geotechnical Design</td>
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<tr>
<td>Joaquin Pedrin, Caltrans</td>
<td>Landscape Architecture</td>
</tr>
<tr>
<td>Greg Pera, Caltrans</td>
<td>Senior Biologist</td>
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<tbody>
<tr>
<td>Julie Petersen, CH2M</td>
<td>Environmental Planner</td>
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<tr>
<td>Chris Pincetich, Caltrans</td>
<td>Biologist</td>
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<td>Kyle Rabellino, Caltrans</td>
<td>Archaeology</td>
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<td>Chris Risden, Caltrans</td>
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<td>Kathryn Rose, Caltrans</td>
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<td>Sergio Ruiz, Caltrans</td>
<td>Pedestrian and Bicycle</td>
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<td>Austen Sandifer, CH2M</td>
<td>Editor</td>
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<tr>
<td>Erika Sawyer, CH2M</td>
<td>Senior Reviewer</td>
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<tr>
<td>Nandini Vishwanath, Caltrans</td>
<td>Hazards and Hazardous Materials</td>
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<td>Chris Wilson, Caltrans</td>
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<tr>
<td>Fred Witteborn, Caltrans</td>
<td>Principal Engineer</td>
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<tr>
<td>Dianne Yee, Caltrans</td>
<td>Pedestrian and Bicycle</td>
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Chapter 7 Distribution List

The Initial Study with proposed Mitigated Negative Declaration will be circulated to the following agencies and government officials on this list:

**Agencies:**
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- San Francisco Bay Regional Water Quality Control Board
- California Department of Fish and Wildlife
- Office of Planning and Research
- Sonoma County Clerk

**Elected Officials:**
- Senator Dianne Feinstein
- Senator Kamala D. Harris
- Congressman Mike Thompson
- State Senator Mike McGuire
- Assembly Member Marc Levine
- Supervisor Susan Gorin
- Mayor Madolyn Agrimonti
- Mayor Chris Coursey

**City and County of Sonoma:**
- City Manager Cathy Capriola
- Planning Director David Goodison
- Project Review Division Brian Keefer

**City of Santa Rosa:**
- City Manager Sean McGlynn
- Planning and Economic Development David Guhin

**Community Member:**
- Kevin Johnston
Appendix A  Preliminary Site Plans
A1 Sonoma Creek Bridge
Appendix B  Title VI Policy Statement
April 2018

NON-DISCRIMINATION
POLICY STATEMENT

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

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

For information or guidance on how to file a complaint, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

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

Laurie Berman
Director

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."
Appendix C  Project Features, Avoidance and Minimization, and Mitigation Measure Summary

Caltrans has incorporated numerous project features and avoidance and minimization measures (AMMs) into the proposed project to avoid and minimize the impacts of this project. The regulatory agencies may require conditional measures that are not listed below because they are unknown at this time. The list below is categorized by resource type and includes a general overview of the most important and applicable project features and measures.
## Permits

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## Commitments

### Pre-Construction

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<td>AMM BIO-1: Worker Environmental Awareness Training. Before beginning construction activities, a qualified biologist will conduct an education program for all project construction personnel. At a minimum, the training will include: a description of CRLF, CCCS, and other listed species, as well as migratory birds and their habitats; a discussion of the potential occurrence of these species within the project area; an explanation of the status of these species and protection; a description of measures to be implemented to conserve listed species and their habitats as they relate to the work site; and a description of boundaries within which construction may occur. Upon completion of the training program, construction personnel will sign a form stating they attended the program and understand all the AMMs and regulatory implications. A fact sheet conveying this information will be prepared and distributed to the construction and project personnel entering the project footprint area.</td>
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<td>Biologist, Contractor</td>
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<td>AMM BIO-2: Wildlife Exclusion Fencing (WEF). Before starting construction, WEF will be installed along the project footprint perimeter in the areas where listed wildlife could enter the project site. Locations of the WEF will be determined in coordination with the appropriate regulatory agencies. The final project plans will depict the locations where WEF fencing will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF fencing material, and proper WEF installation and maintenance. The WEF will remain in place throughout the project duration, be regularly inspected for stranded animals, and be fully maintained. At some locations, WEF will be installed during each construction phase and removed when that phase is completed.</td>
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<td>Biologist, Engineer, Contractor</td>
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<td>AMM BIO-3: Preconstruction Surveys. A USFWS-approved biologist will conduct preconstruction CRLF surveys no more than 20 calendar days prior to any initial ground disturbance and immediately prior to ground disturbance. Suitable aquatic and upland habitat within the project footprint (Figures BIO-2a and BIO-2b), including refugia habitat, such</td>
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as under shrubs, downed logs, small woody debris, or mammal burrows will be thoroughly inspected. If a CRLF is observed, the individual will be evaluated and relocated in accordance with the observation and handling protocol described in AMM BIO-5. If safe, the biologist will investigate areas of disturbed soil for signs of CRLF within 30 minutes of initial disturbance.

AMM BIO-6: Cover Boards. The USFWS-approved biologist will ensure that cover boards are placed in strategic locations throughout the project footprint during the preconstruction surveys. These cover boards will be checked daily during construction for CRLF when the USFWS-approved biologist is onsite.

Project Feature BIO-2: Environmentally Sensitive Area (ESA) Fencing. Before starting construction, ESAs (defined as areas containing sensitive habitats, adjacent to or within construction work areas, for which physical disturbance is not allowed) will be clearly delineated using temporary, high-visibility, orange fencing. The ESA fencing will remain in place throughout the project duration and prevent construction equipment or personnel from entering sensitive habitat areas. The final project plans will depict the locations where ESA fencing will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs.

Project Feature BIO-4: Implementation of BMPs. In accordance with RWQCB requirements, a stormwater pollution prevention plan (SWPPP) will be developed, and erosion control BMPs will be implemented to minimize wind- or water-related erosion. The Caltrans Construction Site Best Management Practice (BMP) Manual (Caltrans 2017d) 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 will include:

a. Disallowing discharging of pollutants from vehicle and equipment cleaning into storm drains or watercourses...
b. Keeping vehicle and equipment fueling and maintenance operations at least 50 feet away from watercourses, except at established commercial gas stations or an established vehicle maintenance facility

c. Collecting and disposing of concrete wastes and water from curing operations in appropriate washouts, located at least 50 feet from watercourses

d. Maintaining spill containment kits onsite at all times during construction operations and/or staging or fueling of equipment

e. Using water trucks and dust palliatives to control dust in unvegetated areas, and covering temporary stockpiles when weather conditions require

f. Installing coir rolls or straw wattles along or at the base of slopes during construction to capture sediment

g. Protecting graded areas from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting (jute or coir) as appropriate on sloped areas

h. 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

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Project Feature Bio-7: Vegetation Removal. Vegetation that is within the cut-and-fill line, or growing in locations where permanent structures will be placed (such as road alignment, shoulder widening, or bridge abutments), will be cleared. Vegetation will be cleared only where necessary and will be cut above soil level, except in areas that will be excavated. This will allow plants that reproduce vegetatively to resprout after construction. Clearing and grubbing of woody vegetation will occur by hand or using construction equipment, such as mowers, backhoes, and excavators. If clearing and grubbing or tree removal occur between February 1 and September 30, a qualified biologist will conduct a survey for nesting birds within the areas to be disturbed, including a perimeter buffer of 50 feet for passerines and 300 feet for raptors, before clearing activities are to begin. All nest avoidance requirements of the Migratory Bird Treaty Act and California Fish and Game Code will be observed (including establishing appropriate protection buffers around active nests until young have fledged). Cleared vegetation will be removed from the project footprint to prevent...
Environmental Commitments Record for EA 04-4H050 / ID 0413000080

SON 12 Bridge Scour Mitigation
SON-012-25.800/33.300
Current Project Phase: 0.2

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<td>attracting animals to the project site.</td>
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**Water Quality**

Project Feature HYDRO-2: Prior to commencement of construction activities, a SWPPP must be prepared by the Contractor and approved by Caltrans, pursuant to Department 2015 Standard Specification 13-3.

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<td>SSP</td>
<td>Contractor</td>
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Project Feature HYDRO-4: Creek Diversion. A creek diversion would be implemented to provide for a dry working environment within the creek channel. This can take different forms, such as gravel bag cofferdam.

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<td>Contractor and Biologist</td>
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Project Feature HYDRO-6: Prior to construction completion, soil would be stabilized for any tree removal and disturbed areas.

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Project Feature HYDRO-7: A risk level determination is required based on sediment and receiving water risks. Currently, the risk level has been determined to be "2". Requirements for this are found in Attachment D of the CGP. Further, sampling and monitoring of construction site discharge point(s) would be required.

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**Other**

Project Feature TRAFFIC-1: A traffic management plan would be prepared in advance of construction. The plan would provide detour routes, accessibility, and notification to emergency and medical providers, in the project location, of alternate access routes during nighttime lane closures. A public information officer would be assigned to this project during the construction phase to keep the public informed on the status of the project, and provide information about road closures, accessibility, and need for use of alternate routes, to be disseminated to the public and public emergency services.

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<td>AMM BIO-4: Biological Monitoring. The USFWS-approved biologist will be present during construction activities where harm to a listed species could occur such as during ground disturbing activities. Through communication with the resident engineer or his/her designee, the USFWS-approved biologist may stop work if deemed necessary for any reason to protect listed species and will advise the resident engineer or designee on how to proceed accordingly.</td>
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<td>Biologist</td>
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<td>AMM BIO-5: Protocol for Species Observation. If CRLF are encountered in the project footprint, work within 50 feet of the animal will cease immediately until the animal leaves the construction zone or is removed by the USFWS-approved biologist. The Resident Engineer and the USFWS-approved biologist will be notified immediately of CRLF discoveries and will then notify the USFWS. Based on the professional judgment of the approved biologist, if project activities can be conducted without harming or injuring the animal(s), the animals may be left at the location of discovery and monitored by the approved biologist. 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. The USFWS-approved biologist will release captured CRLF within appropriate habitat in the riparian corridor, but outside of the construction zone.</td>
<td>NES</td>
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<td>Biologist, Engineer</td>
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<td>AMM BIO-7: Construction in the creek is scheduled during the summer and fall, when the creek will be dry to mostly dry (June 15 to October 15). Conducting work within the proposed in-water work window will minimize the likelihood of potential mortality.</td>
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<td>AMM BIO-8: Prior to dewatering within a coffer dam or sheet piling installation, fish and other aquatic vertebrates within the area to be dewatered will be removed and relocated to appropriate areas out of the construction area. An approved fish removal and relocation plan will be developed, and approved by the CDFW and NMFS, prior to fish recovery operations per the PBO. After completion of the proposed project, all materials used to maintain flow and divert water from the work area during the construction period, including</td>
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<tr>
<td>any cofferdams, pipe, filter fabric, and gravel, will be removed from the streambed. All excess soil will be disposed of at an approved upland site.</td>
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<td>Project Feature BIO-1: Seasonal Avoidance. To the extent practicable, construction will not occur during the wet season. Except for limited vegetation clearing (necessary to minimize effects to nesting birds), work within the creek will be limited to the period from June 15 to October 15.</td>
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<td>Contractor</td>
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<td>Project Feature BIO-10: Proper Use of Erosion Control Devices. To prevent animals, including CRLF and/or FYLF, from becoming entangled or trapped in erosion control materials, plastic monofilament netting (that is, erosion control matting) or similar material will not be used within the project area. Acceptable substitutes will include coconut coir matting or tackifier hydroseeding compounds.</td>
<td>Std.Spec</td>
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| Project Feature BIO-3: Dewatering. Dewatering and discharging activities will be conducted according to standard Caltrans requirements, as follows:  
  a. The dewatering plan will be submitted to USFWS for review and approval in advance of its implementation.  
  b. The USFWS-approved biologist will be present during dewatering activities to relocate listed species as needed.  
  c. Upon completion of construction, any barrier to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate.  
  d. If dewatering system requires pumping, all intakes will be completely screened with wire mesh not larger than 5 millimeters, to prevent aquatic vertebrates, including, CRLF and/or CCCS from entering pump system.  
  e. Dewatering would be used between June 15 and Oct 15 to prepare for in-creek work. | NES    | SSP      | Biologist, Contractor |                  |                     |      |                  |
| Project Feature BIO-5: Construction Site Management Practices. The following site restrictions will be implemented to avoid or minimize potential effects on listed species and their habitats:  
  a. Enforce a speed limit of 15 mph in the project footprint, in unpaved and paved areas, to reduce dust and excessive soil disturbance. | Std.Spec | SSP      | Contractor        |                  |                     |      |                  |
**Environmental Commitments Record for EA 04-4H050 / ID 0413000080**

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<tr>
<td>b. Locate construction access, staging, storage, and parking areas within the project ROW outside any designated ESA or outside the ROW in areas environmentally cleared and permitted by the contractor. The following areas will be limited to the minimum necessary to construct the proposed project: access routes, staging and storage areas, and contractor parking. Routes and boundaries of roadway will be clearly marked before initiating construction or grading.</td>
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<td>c. Certify, to the maximum extent practicable, borrow material is nontoxic and free of weeds.</td>
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<td>d. Enclose food and food-related trash items in sealed trash containers, and remove them from the site at the end of each day.</td>
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<td>e. Prohibit pets from entering the project footprint area during construction.</td>
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<td>f. Prohibit firearms within the project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.</td>
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<td>g. Maintain equipment to prevent the leakage of vehicle fluids, such as gasoline, oils, or solvents, and develop a spill response plan. Hazardous materials, such as fuels, oils, solvents, and similar materials, will be stored in sealable containers, in a designated location that is at least 50 feet from aquatic habitats.</td>
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<td>h. Service vehicles and construction equipment, including fueling, cleaning, and maintenance equipment, at least 50 feet from aquatic habitat, unless separated by topographic or drainage barrier.</td>
<td></td>
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</tr>
<tr>
<td>i. Avoid nighttime work for activities that are practicable to be done during the day. For work that needs to be conducted during the night, direct all lighting downward and toward the active construction work area.</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Project Feature BIO-6: Avoidance of Entrapment. To prevent inadvertent entrapment of animals during construction, excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day using plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals. Replacement pipes, culverts, or similar structures stored in the project area overnight will be inspected before they are**

| SSP | Contractor |
subsequently moved, capped, and/or buried.

Project Feature BIO-9: Reduce Spread of Invasive Species. Caltrans will comply with Executive Order 13112 to reduce the spread of invasive species. The contractor will be required to contain the plant material associated with noxious weeds and dispose of it in a manner that will not promote the spread of the species. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the project area will be covered to the extent practicable with heavy, black, plastic, solarization material until the end of the project.

Cultural Resources

Project Feature CULT-1. Discovery of archaeological materials. If archaeological materials are discovered within or near construction limits, do not disturb the resources and immediately: stop all work within a 60-foot radius of the discovery, secure the area; and notify the Office of Cultural Resources. Caltrans would investigate the discovery. Do not move archaeological resources or take them from the job site. Do not resume work within the radius of discovery until authorized. If ordered, furnish resources to assist in the investigation or recovery of archaeological resources.

Project Feature CULT-2. Discovery of human remains. If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities will stop in any area or nearby area that is suspected to overlie remains, and the County Coroner will be contacted. If the coroner thinks the remains are Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to Public Resources Code, Section 5097.98, will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact Caltrans District 4 so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.
## Hazardous Waste

Project Feature HAZ-1: Specifications for preventing accidental spills. Caltrans Standard Specifications 13-3 BMPs would be implemented to prevent accidental spills into Sonoma Creek and Hooker Creek.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Feature HAZ-1</td>
<td>Std.Spec</td>
<td>SSP</td>
<td>Contractor</td>
</tr>
</tbody>
</table>

## Noise


<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Feature NOISE-1</td>
<td>Std.Spec</td>
<td>SSP</td>
<td>Contractor</td>
</tr>
</tbody>
</table>

## Visual Resources

Project Feature AES-1: Bridge Rehabilitation Measures Avoidance or Minimization of Construction Impacts: 1. New concrete structures shall be Type 85 concrete barriers in plain concrete, 2. New pedestrian rail on north side of Sonoma Creek bridge shall match existing galvanized pedestrian rail in form and finish. 3. RSP and rock rip rap shall be of a type that blends in with the surrounding environment.

Project Feature AES-2: Construction Impact Measures Avoidance or Minimization of Construction Impacts: 1. Place unsightly material, and areas for equipment storage and slaging, so that they are not visible to neighbors and highway users, to the maximum extent feasible – without impacting existing trees and vegetation. If the above is visible, consider screening or covering items to reduce visibility. 2. Revegetate all project disturbed areas. 3. Limit all construction lighting to within the area of work and avoid light trespass onto motorists and neighbors through directional lighting, shielding, and other measures as needed.

Project Feature AES-3: Tree and Vegetation Removal Measures Avoidance or Minimization of Tree/Vegetation Removal During Construction: 1. Place high-visibility temporary
fencing around trees or other desirable vegetation to be protected before roadway/bridge work begins. 2. Relocate the temporary construction easement area away from tree/root zones. 3. Indicate trees to be removed should be indicated on the plans during the design phase after consultation with the Caltrans Landscape Associate. During construction, have the engineer will field mark and approve all trees to be removed, prior to removal.

### Water Quality

| Project Feature HYDRO-1: Temporary construction site BMPs, such as use of silt fence, fiber roll, drainage inlet protection, concrete wash-out, street sweeping, and construction entrance would be deployed for sediment control and material management. | Std.Spec | SSP | Contractor |

| Project Feature HYDRO-3: Implementation of permanent stormwater treatment measures would be included as a condition, equivalent to the net new impervious surface of 0.15 acre. The preferred treatment BMP type is bioretention, which may be designed as either a basin or a swale configuration. | Std.Spec | SSP | Contractor |

| Project Feature HYDRO-5: The preferred treatment BMP type is bioretention, which may be designed as either a basin or a swale configuration. Whereas the soils seem to provide less-than-adequate infiltration site soils may not be suitable for the required infiltration rate. As a result, soil would have to be imported for any bioretention system. | N/A | NSSP | Contractor |

### Other

| CLIMATE CHANGE-1: In accordance with Caltrans Standard Specification 14-9.02, the contractor must comply with all Bay Area Air Management District air-pollution-control rules, regulations, ordinances, and statutes that apply to the work performed for this project. In accordance with Caltrans Standard Specification 7-1.02C, the contractor must comply with all CARB emissions reductions regulations. | Std.Spec | SSP | Contractor |
**Environmental Commitments Record for EA 04-4H050 / ID 0413000080**

**SON 12 Bridge Scour Mitigation**

SON-012-25.800/33.300  
Current Project Phasc: 0,2

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed Name</th>
<th>Date</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIMATE CHANGE-2: Compliance with Title 13, California Code of Regulations §2485 (Adopted by the Air Resources Board on June 15, 2008). This regulation would restrict idling of construction vehicles to no longer than 5 consecutive minutes. The contractor must comply with this regulation to reduce harmful emissions from diesel-powered construction vehicles.</td>
<td>Std.Spec</td>
<td>SSP</td>
<td>Contractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLIMATE CHANGE-3: To the extent that it is practicable for the project, reclaimed water may be used to reduce GHG emissions produced during construction. Currently, 30 percent of the electricity used in California is for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production.</td>
<td>Std.Spec</td>
<td>SSP</td>
<td>Contractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Past-Construction**

**Biology**

<table>
<thead>
<tr>
<th>Mitigation Measure B10-1: Impacts to special-species habitat</th>
<th>Std.Spec</th>
<th>SSP</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>will be mitigated through the restoration of the creek bed, following the removal of the existing Sonoma Creek Bridge, as well as the restoration of the bed and banks at Hooker Creek Bridge location after removal of the old bridge structure and the gravel bar. Both existing bridges will be replaced with single-span structures creating an opportunity for habitat improvement. In addition to addressing the currently eroding creek habitat, the Hooker Creek part of the project will restore about 0.003 acre of creek bank, while about 0.0004 acre of creek bed will be restored at Sonoma Creek. The restored habitat will provide improved bank stability and habitat: connectivity for CRLF, and CCCS.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| Project Feature B10-8: Replant, Reseed, and Restore Disturbed Areas. Caltrans will restore temporarily disturbed areas to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses and shrubs to stabilize ground and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition. | NES | SSP | Contractor | | | | |</p>
<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed Name</th>
<th>Date</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIMATE CHANGE-4: Areas where vegetation removal has occurred would be replanted as soon as those areas are no longer needed for construction activities. The replanted trees would help remove CO2 from the atmosphere.</td>
<td>Std.Spec</td>
<td>SSP</td>
<td>Contractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)

1. Name of Project: State Route 12 Bridge Scour Mitigation
2. Type of Project: Bridge Replacement
3. Date of Land Evaluation Request: 2/15/18
4. Person Completing Form: Maggie Sepulveda
5. Federal Agency Involved: Caltrans District 4
6. County and State: Sonoma County, California

PART II (To be completed by NRCS)

1. Date Request Received by NRCS: 2/15/18
2. Acres Impacted: 74,969
3. Average Farm Size: 165
4. Person Completing Form: Maggie Sepulveda
5. Major Crop(s): Wine Grapes, Milk, Poultry
6. Farmland in Government Jurisdiction: 130,632 Acres, % 12.7
7. Amount of Farmland As Defined in FPPA: 193,033 Acres, % 18.6
8. Name of Local Site Assessment System Used: None
9. Name of Local Site Assessment System: None
10. Date Land Evaluation Returned by NRCS: 2/28/18

PART III (To be completed by Federal Agency)

A. Total Acres To Be Converted Directly: 0.087
B. Total Acres To Be Converted Indirectly, Or To Receive Services: 0
C. Total Acres In Corridor: 1.53

PART IV (To be completed by NRCS) Land Evaluation Information

A. Total Acres Prime And Unique Farmland: 0.087
B. Total Acres Statewide And Local Important Farmland: 0
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted: 0.00004
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value: Data Not Ava

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points): 27

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 655.5(c))

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Maximum Points</th>
<th>Corridor A</th>
<th>Corridor B</th>
<th>Corridor C</th>
<th>Corridor D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Area in Nonurban</td>
<td>15</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Perimeter in Nonurban</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Percent Of Corridor Being Farmed</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Protection Provided By State And Local Government</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Size of Present Farm Unit Compared To Average</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Creation Of Nonfarmable Farmland</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Availability Of Farm Support Services</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. On-Farm Investments</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9. Effects Of Conversion On Farm Support Services</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10. Compatibility With Existing Agricultural Use</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL CORRIDOR ASSESSMENT POINTS</td>
<td>160</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

PART VII (To be completed by Federal Agency)

Relative Value Of Farmland (From Part V) = 100
Total Corridor Assessment (From Part VI above or a local site assessment) = 160
TOTAL POINTS (Total of above 2 lines) = 280

1. Corridor Selected: Corridor A
2. Total Acres of Farmlands to be Converted by Project: 0.087
3. Date Of Selection: 3/6/2018
4. Was A Local Site Assessment Used? YES NO
5. Reason For Selection:

Corridor A is the alternative provided by the proposed project.

Signature of Person Completing this Part: [Signature]
DATE: 3/6/2018

NOTE: Complete a form for each segment with more than one Alternate Corridor.
CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor-type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

1. How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
   - More than 90 percent - 15 points
   - 90 to 20 percent - 14 to 1 point(s)
   - Less than 20 percent - 0 points

2. How much of the perimeter of the site borders on land in nonurban use?
   - More than 90 percent - 10 points
   - 90 to 20 percent - 9 to 1 point(s)
   - Less than 20 percent - 0 points

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
   - More than 90 percent - 20 points
   - 90 to 20 percent - 19 to 1 point(s)
   - Less than 20 percent - 0 points

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
   - Site is protected - 20 points
   - Site is not protected - 0 points

5. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the County?
   - (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
   - As large or larger - 10 points
   - Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

6. If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
   - Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
   - Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
   - Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

7. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
   - All required services are available - 5 points
   - Some required services are available - 4 to 1 point(s)
   - No required services are available - 0 points

8. Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
   - High amount of on-farm investment - 20 points
   - Moderate amount of on-farm investment - 19 to 1 point(s)
   - No on-farm investment - 0 points

9. Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
   - Substantial reduction in demand for support services if the site is converted - 25 points
   - Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
   - No significant reduction in demand for support services if the site is converted - 0 points

10. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
    - Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
    - Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
    - Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points
Legend

- HookerCreekBridgeProjectArea
- Streams Intermittent
- Streams Permanent

MUSYM, MUNAME

- GID; Goulding cobbly clay loam, 5 to 15 percent slopes
- RhD; Red Hill clay loam, 2 to 15 percent slopes
- TuC; Tuscan cobbly clay loam, 0 to 9 percent slopes

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

1 inch = 87 feet
<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Prime Farmland Indicator</th>
<th>Acres</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>GID</td>
<td>Goulding cobbly clay loam, 5 to 15 percent slopes</td>
<td>Not prime farmland</td>
<td>1</td>
<td>83%</td>
</tr>
<tr>
<td>RhD</td>
<td>Red Hill clay loam, 2 to 15 percent slopes</td>
<td>Farmland of statewide importance</td>
<td>0.1</td>
<td>8%</td>
</tr>
<tr>
<td>TuC</td>
<td>Tuscan cobbly clay loam, 0 to 9 percent slopes</td>
<td>Not prime farmland</td>
<td>0.1</td>
<td>8%</td>
</tr>
</tbody>
</table>

Prime Farmland Total:

<table>
<thead>
<tr>
<th>Total:</th>
<th>1.2</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>
Appendix E  Notice of Availability and Example Notification Letter
PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Sonoma

I am a citizen of the United States and a resident of the county aforesaid: I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of The Press Democrat, a newspaper of general circulation, printed and published DAILY IN THE City of Santa Rosa, County of Sonoma; and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Sonoma, State of California, under the date of November 29, 1951, Case number 34831, that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates to wit:

The Press Democrat - Legal Notices
4/20 1x - 04/20/2018

I certify (or declare) under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Dated at Santa Rosa, California, on

04/20/2018

[Signature]
STATE OF CALIFORNIA,
County of Sonoma

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled manner. I am a principal clerk of the printer of the Sonoma West Times & News, a newspaper of general circulation, printed and published Weekly in the City of Sebastopol, County of Sonoma, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Sonoma, State of California, under the date of July 11, 1952. Case Number 35776; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates; to-wit:

April 19

in the year 2018.

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Healdsburg
California, this 20 day of April 2018.

[Signature]
April 18, 2018

To Whom it may concern,

The California Department of Transportation (Caltrans), the lead agency under the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), is pleased to report that the draft Initial Study with proposed Mitigated Negative Declaration (IS/MND) for State Route (SR) 12 Bridge Scour Mitigation Project has been drafted and is being made available for public review.

The proposed project involves replacement of two bridges located in a rural area on SR 12 in Sonoma County. The first is Sonoma Creek Bridge, located between the city of Santa Rosa and the town of Kenwood. The second is the Hooker Creek Bridge, located between the towns of Glen Ellen and Agua Caliente. Caltrans proposes to address scour at Sonoma Creek Bridge and at Hooker Creek Bridge, by replacing both bridge structures, with structurally sound crossings of SR 12, thereby enhancing highway safety.

Caltrans has studied the effects that this project may have on the environment, and has determined there are less than significant impacts with the implementation of mitigation measures. Project features, avoidance and minimization measures, and mitigation measures can be found in Appendix C of the IS/MND.

Per CEQA Section 15073, Caltrans will circulate the IS/MND for review for 30 days. The public review period will begin April 20, 2018 and will end May 21, 2018. During the 30-day public review period, the general public can submit comments regarding this document to Caltrans and may request a public meeting. Caltrans will consider the comments and may respond to the comments after the 30-day public review period. After comments are received, Caltrans may: (1) give environmental approval to the proposed project, (2) conduct additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the proposed project.

An electronic copy of the IS/MND can be found at: http://www.dot.ca.gov/d4/envdocs.htm
In addition, the environmental document is available to the public at the following locations:

- Caltrans District 4, 111 Grand Avenue, Oakland CA 94612
- Sonoma County Library, 211 E Street, Santa Rosa CA 95404
- Rincon Valley Regional Library, 6959 Montecito Boulevard, Santa Rosa CA 95409
- Sonoma Valley Regional Library, 755 West Napa Street, Sonoma CA 95476

TTY users may request copies of the document in alternate formats through the California Relay Service at 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

If there are any questions, please contact me at (510) 286-7195 or Arnica.MacCarthy@dot.ca.gov

Sincerely,

ARNICA MACCARTHY,
Acting Branch Chief, Marin and Sonoma
Office of Environmental Analysis

“Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability.”