Bridge Preventive Maintenance and Scour Measures Project
(Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge)

NAPA COUNTY, CALIFORNIA
STATE ROUTE 29 – NAP PM 38.9/42.9
EA 04- 2J88U; Project ID 04-1800-0401

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
California Department of Transportation

November 2018
General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS), which examines the potential environmental impact of the proposed State Route (SR) 29 Bridge Preventive Maintenance and Scour Measures project in Napa County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of each proposed activity, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.

- Additional copies of this document and related technical studies are available for review at:
  
  Caltrans District 4 Office, 111 Grand Avenue, Oakland, CA 94612
  Calistoga Public Library, 1108 Myrtle Street, Calistoga, CA 94515
  Napa County Library, 580 Coombs Street, Napa, CA 94559
  St. Helena Public Library, 1492 Library Lane, St. Helena, CA 94574

You can also download or view the report online at http://www.dot.ca.gov/dist4/envdocs.htm

- We’d like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline.

- Send your comments via post mail to:

California Department of Transportation, District 4, Attn: Karen Jang, P. O. Box 23660, MS 8-B, Oakland, CA 94623-0660.

- Send comments via email to: Karen.Jang@dot.ca.gov

- A public open house/map display is scheduled for this project on Tuesday, November 13, 2018 from 5:30 PM to 7:30 PM at the Calistoga Community Center, 1307 Washington Street, Calistoga, CA 94515.

- Be sure to send comments by the deadline: December 3, 2018.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. Caltrans may design and construct all or part of the project if the project is given environmental approval and funding is obtained.
Project Information

Location

The California Department of Transportation (Caltrans) proposes to rehabilitate the following three bridges on State Route (SR) 29, in unincorporated Napa County to address scour damage: Garnett Creek Branch Bridge (Bridge No. 21-0111) at PM 38.96, Garnett Creek Bridge (Bridge No. 21-0005) at post mile (PM) 39.08, and No Name Creek Bridge (Bridge No. 21-0100) at PM 42.83. Within the project limits, SR 29, is a north-south two-lane undivided conventional highway.

The project limits, encompassing the project footprints of all three bridge locations, are between PMs 38.9 and 42.9. Each bridge has an individual project footprint. These footprints include all construction related work and staging and storage areas. Garnett Creek Branch Bridge has a footprint between PM 38.9 to 39.0 and is approximately 1.8 miles north of the City of Calistoga, Garnett Creek Bridge has a footprint between PM 39.0 to 39.1 and is approximately 1.9 miles north of the City of Calistoga, and No Name Creek Bridge has a footprint between PM 42.8 to 42.9 and is approximately 4.3 miles north of the City of Calistoga.

See Figure 1 for a Project Vicinity and Location Map, which shows the location of each bridge.

Existing Setting

The proposed project is in a rural part of Napa County north of the City of Calistoga, the nearest city, which had a population of 5,273 residents reported in the 2017 United States Census. Garnett Creek Branch Bridge is approximately 1.8 miles north of the City of Calistoga, and is the nearest of the three bridges.

The land use within the project vicinity is predominantly agricultural and rural residential, but also includes small commercial operations. The area is zoned for agricultural reserve and agricultural watershed.

SR 29, is surrounded by views of the Coastal Range mountains, which form the outer bounds of the project corridor. Except for the No Name Creek Bridge site, the landscape is characterized by generally flat shoulders with views of wineries, vine-yard plantings, mature trees and vegetation, and distant mountains. The No Name Creek Bridge location is rural, surrounded by the steep slopes of wooded hillsides and a dense canopy of mature trees and thick vegetation. At the Garnett Creek Branch and Garnett Creek Bridge locations, residential and winery properties exist adjacent to SR 29.

The major drainage pattern for storm water runoff from the project sites conveys into each individual creek. The three creeks feed into the Napa River, which eventually drains into San Pablo Bay.
Figure 1: Project Vicinity and Location Map
INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

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<td>Lead agency name and address:</td>
<td>California Department of Transportation 111 Grand Ave., Oakland, CA 94612</td>
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<tr>
<td>Contact person and phone number:</td>
<td>Karen Jang, Environmental Planner (510) 286-5583</td>
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<td>Project Location:</td>
<td>Napa County, California</td>
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<td>General plan description:</td>
<td>Transportation</td>
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- Biological Opinion from the U.S. Fish and Wildlife Service
- Programmatic Biological Opinion from the National Marine Fisheries Service
- Two 1602 Lake and Streambed Alteration Agreements from the California Department of Fish and Wildlife* 
  - One 1602 permit for the Garnett Creek Branch Bridge and Garnett Creek Bridge locations
  - One 1602 permit for the No Name Creek Bridge location
- Clean Water Act 404 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*
- California Transportation Commission*

Additional copies of this document, as well as the technical studies this document relies on, are available for review at the district office, 111 Grand Ave., Oakland, CA 94612.

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

11/11/2018  
Date

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to California Department of Transportation, Attn: Karen Jang, Environmental Planning, 111 Grand Avenue, MS 8-B, Oakland, CA 94612, or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.
See Figure 2 below for general bridge features. The elevation view of the figure below is intended as a reference for general bridge feature terminology used throughout this document, and is not an exact representation of any of the three bridges in the project.

**Figure 2: General Bridge Features – Elevation View**

![Elevation View Diagram]

**Garnett Creek Branch Bridge**

Garnett Creek Branch Bridge, built in 1920, is a two-cell reinforced concrete box (RCB) culvert with flared and sloped inlet wingwalls and straight stepped outlet wingwalls. An inlet is where water flows into the culvert, and an outlet is where water flows out of the culvert. Wingwalls act as retaining walls adjacent to the bridge. See Figure 2 above for a visual representation of a wingwall.

The total length of the bridge, including wingwalls and endwalls, is approximately 45 feet and the total width is approximately 25 feet. An endwall is a wall at the culvert outlet that supports the road, protects the culvert, and guards against erosion. There is a concrete apron, a form of scour protection, along the bottom of the creek bed, extending from the downstream end of the RCB to the downstream end of the stepped wingwalls. Scour, the removal of sediment around the base of bridges caused by swiftly moving water, is undermining the downstream concrete apron and erosion is cutting into the downstream banks near the ends of the wingwalls on both sides. Natural river rock near the eroding bank on the downstream side have been washed away during periods of heavy flow throughout the years. Erosion is also occurring near the end of the wingwall on both banks of the downstream side. The majority of erosion is occurring on the southbound side of SR 29.

The bridge stands along a relatively flat portion of SR 29, in rural wine region. The roadway width accommodates one travel lane in each direction with narrow shoulders and Metal Beam Guard Rail
(MBGR). See Figure 2 for a visual representation of a guard rail. There are 3 privately owned storage tanks and vineyards within 30 feet of the bridge outlet near the eroding streambank.

On the northbound side of SR 29, within the project footprint for this location, the state right-of-way (ROW) extends approximately 15 feet from the existing edge of pavement. Along the southbound side of SR 29, within the project footprint for this location, the state ROW extends approximately 25 feet from the existing edge of pavement.

See Figure 3 on page 11 for the Garnett Creek Branch Bridge project footprint.
Garnett Creek Branch Bridge – RCB culvert with scour damage to wingwalls and concrete apron

View looking in southbound direction of SR 29, at rural setting of Garnett Creek Branch Bridge
**Garnett Creek Bridge**

Garnett Creek Bridge is an historic three span stone masonry bridge, and is listed on the National Register of Historic Places (NRHP). Originally built in 1902 as a single span bridge, it was updated in 1914 and two additional spans were added. A bridge span is the distance between two support structures, and can be seen in the three stone arches at Garnett Creek Bridge.

The total length of the existing bridge, including wingwalls and end walls, is approximately 81 feet and the total width is approximately 24 feet. The abutment, the structure at the end of a bridge which the bridge rests upon, and pier foundations, columns that support the structure, are on spread footings. Footings are the parts of the bridge that rest directly on the ground. At each corner of the bridge are MBGR railings with flared end treatments. The masonry bridge railing height is approximately 2 feet and 6 inches. Along the northbound lane is an overhead PG&E electrical distribution and communication line, located approximately 15 feet from the edge of the bridge deck and 20 feet above the bridge deck. Garnett Creek Bridge has a history of scour damage with varying degrees of footing exposure. There has also been some partial undermining of the footings.

See **Figure 1** on page 2 for a visual representation of an abutment, piers, and footings.

North and south of the project, SR 29, remains a 2-lane rural conventional highway. Immediately adjacent to state ROW at this bridge location are four private properties, one at each quadrant.

On the northbound side of SR 29, within the project footprint for this location, the state ROW extends approximately 15 feet from the existing edge of pavement. Along the southbound side of SR 29, within the project footprint for this location, the state ROW extends approximately 25 feet from the existing edge of pavement.

See **Figure 5** on page 17 for the Garnett Creek Bridge project footprint.
Garnett Creek Bridge – Three span stone masonry bridge

Garnett Creek Bridge – Footing exposure
No Name Creek Bridge

No Name Creek Bridge, built in 1923, is a bottomless single cell RCB culvert on spread footings, with flared and sloped inlet and outlet wingwalls. Single cell means the culvert is a one-piece structure. The bridge culvert and footings are on a steep slope from inlet to outlet. The total length of the bridge, including wingwalls and end walls, is approximately 60 feet and the total width is approximately 19 feet.

Scour has critically eroded the streambed directly in front of the abutment on the west side of the culvert and a portion of the abutment on the east side of the culvert, exposing and undermining the footings at each abutment. Erosion has reached a depth of up to 3 feet in some areas.

North and south of the project, SR 29, remains a 2-lane rural conventional highway and is surrounded by densely wooded hillsides.

On the northbound side of SR 29, within the project footprint for this location, the state ROW extends approximately 20 feet from the existing edge of pavement. Along the southbound side of SR 29, within the project footprint for this location, the state ROW extends approximately 20 feet from the existing edge of pavement.

See Figure 6 on page 17 for the No Name Creek Bridge project footprint.
No Name Creek Bridge – Bottomless single cell RCB culvert

View of exposed scour hole along the abutment at No Name Creek Bridge
Purpose and Need
This project proposes to protect the structural integrity of the Garnett Creek Branch, Garnett Creek, and No Name Creek bridges on SR 29, in Napa County.

Caltrans performs routine maintenance inspections of State-owned transportation facilities to ensure safe and efficient travel throughout the State of California. This project is needed because recent Caltrans’ Structure Maintenance inspections show that these bridges have damage from scour that threatens the structural integrity of the bridges. The structural integrity of all three bridges will continue to worsen if existing and future scour damage is not addressed. Therefore, Caltrans is proposing this project as a preventive measure.

Project Funding and Programming
The project is funded from the 2018 State Highway Operation and Protection Program (SHOPP), under the Capital Bridge Preventative Maintenance Program, Program Code 201.119. The total approximate cost of the project for support and capital, including construction costs, is $10,402,000.
Project Description

Preliminary project plans and cross sections are located in Appendix E. These plans are not the final design of the project.

Scour Damage Restoration and Prevention

Garnett Creek Branch Bridge

The project proposes to repair scour damage at the outlet concrete apron by adding a cutoff wall along the entire length of the apron at the downstream end. A cutoff wall is a vertical wall below the creek bed, and will reach a depth of approximately 7 feet. Further activities involve excavating and stockpiling the existing creek bed material, placing approximately 30 feet wide x 30 feet long x 5 feet deep, or 170 cubic yards, of rock slope protection (RSP), then covering the RSP with the previously stockpiled creek bed material. To repair the creek bank erosion, the project proposes to extend the existing length of the outlet wingwalls by 12 feet with a soldier pile wall, adhering to the creek banks. A soldier pile wall is built by inserting beams, or soldier piles, into the ground at spaced intervals, with stacked horizontal slats between the beams.

The horizontal slats, in this case concrete pre-cast paneling, will be placed below the anticipated scour depth in between the soldier piles, creating a retaining wall. The retaining wall will then be backfilled. The existing stepped outlet wingwall will have the steps removed and the wall will be raised to the full height of 6 feet.

The existing MBGR on all four corners of the bridge will be removed and replaced with new Midwest Guardrail System (MGS). MGS is the most recent Caltrans standard for guardrails, and provides improved safety benefits for the travelling public. All new MGS will be treated with a stain to darken and age the material, reducing visual contrast to the rural environment, and maintaining visual unity with the new MGS being installed at Garnett Creek Bridge.

During construction, vegetation clearing will be confined to a minimum within the work areas, temporary construction access roads, and the staging areas necessary for construction activities. Trees may be removed as necessary in these areas. Plant habitat that can be avoided during construction will be flagged and designated under the California or Federal Endangered Species Act as an Environmentally Sensitive Area (ESA). All ESAs are to be avoided by all construction activities, material and personnel. After construction is complete or after each successive construction cycle, creek bank restoration will be performed.

See Figure 3 for the project footprint and work areas for Garnett Creek Branch Bridge.
Figure 3: Garnett Creek Branch Bridge Project Footprint
Garnett Creek Bridge

The project proposes to repair scour by strengthening the soil through grout injection. This method consists of injecting grout into the soil approximately 15 feet deep at roughly 20 locations around each of the two bridge piers, for an approximate total of 40 grout injection locations. Approximately 19 additional grout injection locations will occur along the exposed face of each of the two abutments, totaling approximately 38 grout injection locations, to create a protective barrier and stabilize the bridge substructure. The substructure is the part of the bridge that transfers the load, or weight, to the foundations of the bridge. Grout will be injected into galvanized pipes at locations closest to the piers and abutments, while locations further out from the piers and abutments will have grout injected directly into the ground. Drilling the galvanized pipes into the ground will cause minimal to no vibration impacts to the historic bridge structure.

Prior to grout injection, the existing concrete cap, or apron, adjacent to the piers of the bridge and rip-rap, loose stones used to prevent erosion, lining the creek bed may need to be removed. The contractor will use caution when removing this material to prevent damage to the bridge.

A new concrete cap, measuring 4 feet wide by 2 feet deep, will be placed on top of the grouted soil around each of the two piers. The apron will not be connected to the existing bridge structure and will instead be separated by joint filler and bond breaker, a substance applied to eliminate or reduce the cracking of slabs due to temperature and moisture fluctuations. Bond breakers also avoid shrinkage.

See Figure 4 for the new proposed concrete caps.
To restore the original flow pattern underneath the bridge, approximately 585 cubic yards of native creek bed material will be placed and graded on top of the concrete apron or cap, matching the surrounding creek topography. The grading limits will extend approximately 100 feet downstream and 30 feet upstream of the bridge.

The MBGR on all four corners of the bridge will be removed and replaced with new MGS and connected to anchor blocks. Anchor blocks, which serve to secure guardrails, are typically 2 feet wide x 6 feet long x 3 feet tall, and require 2 feet of excavation depth. These estimated dimensions may vary given the unique features of the existing bridge railing. Anchor blocks will not be connected to the bridge. Architectural treatment and staining for the anchor blocks and MGS guardrail system will be considered during the design phase to reduce their contrast to the historic bridge structure and minimize visual impacts.

To restore the creek topography to natural conditions, one eucalyptus tree on the northbound side of SR 29, and approximately 15 feet from the bridge will be removed. And five eucalyptus trees and/or stumps downstream within the 100 feet grading limits will also be removed for grading activities.

Typical temporary construction area signs, ground mounted and/or embedded, will be placed several hundred feet north and south of the project limits while construction occurs.

Vegetation growing within the mortar or other areas will be removed. Missing, damaged and loose mortar, including mortar damaged during vegetation removal and holes left by removal of existing guardrail, will be repaired with mortar compatible in composite and color, and joint profiles will be replicated to meet existing historic profiles.
All construction activities will be performed in a manner that helps to retain the historic character of Garnett Creek Bridge.

See **Figure 5** for the project footprint and work areas for Garnett Creek Bridge.
Figure 5: Garnett Creek Bridge Project Footprint
**No Name Creek Bridge**

The project proposes to repair scour damage at the abutment footing by first repairing the degraded and undermined footing. Reinforced concrete cut-off walls and/or an invert will be placed along the length of the abutment footings and portions of the wingwalls in 6 to 8 feet long segments, allowing concrete repairs to gain strength prior to proceeding to the next segment. An invert is a horizontal liner below the creek bed. The invert will be fully buried to an approximate depth of 5 feet from the level of the existing creek bed at the downstream side of the culvert mouth. The invert will be connected to the culvert walls just above the concrete footings.

If cut-off walls are used along the footings, they will be anchored with micro-piles, which are small-diameter reinforced columns drilled into the ground. If an invert is used, one or two micro-piles per invert segment may be needed for anchoring and weep-holes will be placed, which are small holes that allow water to drain out from within.

Alternating tapered buttresses will be placed within the invert at the end of each segment. The buttresses are walls within the invert, and help brace the sides of the invert from collapsing in against pressure. The buttresses also serve to retain rock and soil in periods of heavy rain or flooding, and reduce water velocity. Cut-off walls will be placed at the end of the inlet and outlet below the invert. The new cutoff walls and invert will be buried and the creek bed will be regraded to natural conditions. Culvert walls and footings will be inspected for voids behind the wall. Voids will be contact grouted through grout ports if needed.

No Name Creek Bridge is a natural bottom culvert and may require bracing of the culvert walls to prevent the structure from settlement.

Fewer than ten California Bay trees are likely to be removed in and near the creek channel, along with approximately four bigleaf maple trees. Both tree species are native but not listed as endangered or threatened.

See Figure 6 for the project footprint and work areas for No Name Creek Bridge.
Figure 6: No Name Creek Bridge Project Footprint

No Name Creek Bridge Project Components and Impacts
Bridge Preventative Maintenance and Scour Mitigation Project
Napa County, California
State Route 29, Postmiles 36.96/42.83
EA 04-2J86-U/PID 0418000401

Legend
- Staging Area (Temporary Impact)
- Access Road (Temporary Impact)
- Creek Work (Permanent Impact)
- Project footprint
Additional Project Features

Project features are design elements and/or standard measures which are incorporated into a project and are intended to reduce environmental effects resulting from proposed project activities.

Project Features: Project as a Whole

1. Construction, below top of bank will be constrained to occur during the summer season, during creek low flows (starting June 15 and ending October 15). Work in the creek will be limited to when the creek is mostly dry, as much as practicable, or when the creek diversion has been installed.
2. Caltrans will complete advanced tree removal activities outside of the frog breeding season (November through April) at the bridge locations.
3. New structures or wingwalls, if visible to the public, shall be aesthetically treated to reduce glare. Aesthetic treatments details will be determined during the design phase of the project.
4. Trees and root zones within Temporary Construction Easement areas will be protected.
5. Place high visibility temporary fencing around significant trees or other desirable vegetation to be protected before roadway/bridge repair work begins
6. During construction, the Resident Engineer, contractor, and Caltrans biologist will field mark and approve all trees to be removed prior to removal
7. Place unsightly material, storage of equipment 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
8. Limit all construction lighting to within the area of work and avoid light spillage onto motorists and neighbors through directional lighting, shielding, and other measures as needed
9. Nighttime work will be avoided to the maximum extent practicable. Should nighttime work need to be conducted, all lighting will be directed downwards and towards the active construction area.
10. Any vegetation that is within the cut and fill line or growing in locations where permanent structures will be placed (e.g., road alignment, shoulder widening, bridge abutments, etc.), will be cleared. However, vegetation will be cleared only where necessary and will be cut above soil level, except in areas that will be excavated for roadway construction. This will allow plants that reproduce vegetative to resprout after construction. All clearing and grubbing of woody vegetation will occur by hand if necessary or by using construction equipment such as backhoes and excavators.
11. In the event that noxious weeds are disturbed or removed during construction related activities, the contractor will be required to contain the plant material associated with these noxious weeds and dispose of them in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses and environmental clearances for properly disposing of materials. 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, and removed post-construction.

12. If active nests of migratory birds are present within the project area, work within 50 feet of the nest of passerine species or 300 feet of raptor species will be avoided, and monitored.

13. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species’ sensitivity to disturbance, and the intensity/type of potential disturbance. Distance of non-disturbance buffer will be determined by the biological monitor in coordination with USFWS and/or California Department of Fish and Wildlife (CDFW), depending on the species. To minimize and avoid take of migratory birds, their active nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season (Feb 1 through Sep 30), 72 hours prior to preconstruction. This work will be limited to vegetation and trees that are within the project footprint.

14. Exclusion methods will be used to prevent migratory birds from nesting and roosting within the project area (February 1 to September 30).

15. Attempts to minimize tree removal will include trimming wherever possible.

16. If an endangered plant is found, ESA fencing will be placed, to the extent practicable, around the area to ensure the areas will be avoided.

17. If feasible, schedule construction activities during the day, between 6:00 a.m. to 9:00 p.m.

**Project Features: Garnett Creek Branch Bridge**

1. Metal guardrails will be provided with aesthetic treatment to darken and age their finish

2. Erosion Control Matting. To avoid wildlife entrapment, plastic monofilament netting or similar material will not be used. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

3. Replace Bicycle Warning and “Share the Road” sign with R117 (CA) sign “Pass Bikes 3FT Min”.

**Project Features: Garnett Creek Bridge**

1. At Garnett Creek Bridge, concrete aprons at the base of the bridge footings will be covered with native creek bed material or will incorporate context-sensitive applications of texture and/or color.

2. Metal guardrails will be provided with aesthetic treatment to darken and age their finish. This will be confirmed with Caltrans Professionally Qualified Staff (PQS), Caltrans Landscape Architecture, and Caltrans Resident Engineer.

3. The contractor will perform tests to identify and determine the composition and strength of the existing bridge mortar and confirm compatibility. The contractor will consult with Caltrans PQS Architectural Historian and Caltrans Resident Engineer to confirm the choice of mortar.
4. The contractor will perform tests to identify the color of the existing bridge mortar and confirm new mortar color with Caltrans PQS Architectural Historian and Caltrans Resident Engineer.

5. Contractor will repoint/repair missing mortar in a method consistent with existing historic profile after confirming with Caltrans PQS Architectural Historian and Caltrans Resident Engineer. All work will be performed in the gentlest means possible. No equipment that has the potential to damage existing stable mortar or stones will be used.

6. Injection grouting to be used around the base of the piers to stop scour. This action will not touch the bridge.

7. Creek material that is removed to allow for injection of grout will be replaced once stabilization is completed, and grouting is not visible.

8. Guardrail anchor blocks placed near the bridge rail will not be attached to or touch the bridge, to prevent impacts to the historic bridge.

9. The aesthetic treatment given to the anchor blocks will prevent substantial visual impacts. The aesthetic treatment will not mimic the characteristic of the existing historic bridge, but will be designed to visually lessen the impact of the blocks while not replicating them. This will be confirmed with Caltrans Professionally Qualified Staff (PQS) and Caltrans Landscape Architecture. Details of the aesthetic treatment will be determined during the design phase of the project.

10. Anchor blocks will be even with or slightly below the existing cap stones on the parapet. Existing holes used to anchor the guardrails to the bridge will be filled with compatible mortar.

11. No staging will occur on the bridge, nor will any equipment be extended over the bridge parapet.

**Project Features: No Name Creek Bridge**

1. To the maximum extent practicable, work will not occur at dawn or dusk, when bats and small mammals are most active. Caltrans will install exclusionary measures prior to the initiation of construction to prevent bats from roosting under the bridge.

2. Any trees that may provide roosting habitat, such as large snags, trees with cavities, and trees within or adjacent to the riparian habitat, should be removed using the two-phase method of tree removal. This method involves removing limbs during the afternoon of the first day of removal, and stumping the tree during the following afternoon.

3. Bike route signage will be included (please see Pedestrian and Bicycle Facilities section below for details)

4. RSP and rock rip rap shall be colored with an environmental safe liquid solution that prematurely ages and oxidizes the rock to blend it in with the surrounding environment.
Pedestrian and Bicycle Facilities

There are no existing dedicated pedestrian, bicycle, or other non-motorized facilities within the project corridor. SR 29 within the project limits lacks standard shoulders for use by pedestrians and non-motorized users. However, the segment of SR 29, north of Calistoga is regularly used by bicyclists for tourist and recreational trips.

The 2018 Napa Countywide Bicycle Plan Draft Bicycle Facility Map proposes SR 29 from Tubbs Lane to the Lake County border as a Class III rural bike route, and SR 29 from Silverado Trail/Lincoln Ave/Lake St to Tubbs Lane to have Class II bike lanes. No Name Creek Bridge is within the proposed Class III rural bike route and will require bike route signage. Garnett Creek Bridge and Garnett Creek Branch Bridge are within the limits of the proposed Class II bike lanes; however, the project scope focuses on repairing scour damage at the three bridges. Therefore, no improvements to pedestrian, bicycle, or other non-motorized facilities within the project corridor are proposed.

The following measures will be taken during construction of the project:

1. If one-way traffic control is being done with a signal, a push button needs to be provided to ensure bicyclists can actuate the signal and there needs to be sufficient timing for bicyclists to travel through.
2. An alternate route or detour may be developed during the design phase of the project to accommodate bicyclists and pedestrians.
3. Bicycle travel will be accommodated during construction by providing the “Share the Road”, “Bikes May Use Full Lane” and “Pass Bikes 3FT Min” signs within the project limits to allow bicyclists to use the travel lanes with motorists.
4. Public outreach will be conducted prior to construction to notify the community about bicycle and pedestrian movement during construction.

Utilities Relocation

Utility owners within the project limits of Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge are Pacific Gas & Electric (PG&E) and American Telephone & Telegraph (AT&T), channeling through a joint pole AT&T and PG&E line at each location. Three options for utility work for the proposed project are outlined below:

1. Existing utility poles will be de-energized, or disconnected from a power supply, and power routed through temporary poles during construction. Temporary poles will be removed post-construction and existing power lines re-energized.
2. Raise the height of existing utility poles to allow for the movement of construction equipment underneath.
3. Existing utility poles will be relocated away from work areas.
Option 1 is the most likely scenario for the proposed project. Further details of utility work will be determined during the design phase of the project.

For all three utility work options, work will remain on pavement and no additional tree removal is anticipated for work associated with utilities. At Garnett Creek Bridge, utility work will avoid all contact with the historic bridge.

All utility work will remain within the project footprint, and environmental impacts between all three options will be similar.

**Transportation Management Plan for Use During Construction**

A Transportation Management Plan (TMP) will be prepared and implemented during the design phase to minimize or prevent delays and inconveniences to the traveling public and to address traffic impacts from stage construction and specific traffic handling concerns during construction.

The TMP may include press releases to notify and inform multi model travelers, businesses, community groups, local entities, emergency services, and local officials of upcoming closures or detours.

At Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge, one-way traffic control with flagging in both directions, will be utilized throughout construction and will include temporary construction area signs (ground mounted and/or embedded) to direct traffic during operation. The need for nighttime and/or weekend lane closures will be identified during the design phase.

Construction activities, specifically within the creek bed for all three bridges, will be performed concurrently to stay within the dry season window of June 15 to October 15, and will take approximately 50 working days. The total construction duration is anticipated to be approximately 90 working days, which includes construction activities outside of the creek bed.

**Staging and Temporary Access Road**

**Garnett Creek Branch Bridge**

A temporary unpaved access road, measuring approximately 20 feet wide and 70 feet long, will be constructed approximately 7 feet north of the existing bridge. This road will be utilized for access to the creek and beneath the structure. After construction, the temporary access road will be restored to pre-construction conditions in accordance with applicable permits and Caltrans requirements.

Two staging areas have been identified for this location. Both are north of the existing bridge, adjacent to SR 29. The staging location closest to the bridge has a total area of approximately 3,500 square feet,
and the second staging location has a total area of approximately 6,400 square feet. Staging areas will be used for equipment storage and stockpiling temporary materials. Materials containing possible contaminants such as fuels, lubricants, oils, or solvents, will be stored off-site or in sealable containers at designated locations per applicable permits and Caltrans requirements.

**Garnett Creek Bridge**

A temporary unpaved access road, measuring approximately 20 feet wide and 70 feet long, will be constructed approximately 10 feet away from the existing bridge on the southbound side of SR 29. This road will be utilized for access to the creek and beneath the structure. After construction, the temporary access road will be restored to pre-construction conditions in accordance with applicable permits and Caltrans requirements.

One staging area has been identified for this location and is adjacent to southbound SR 29, with an area of approximately 5,550 square feet. Staging areas will be used for equipment storage and stockpiling temporary materials. Materials containing possible contaminants such as fuels, lubricants, oils, or solvents, will be stored off-site or in sealable containers at designated locations per applicable permits and Caltrans requirements.

**No Name Creek Bridge**

A temporary unpaved access road, measuring approximately 20 feet wide and 70 feet long, will be constructed approximately 20 feet south of the existing bridge. This road will be utilized for access to the creek and beneath the structure. After construction, the temporary access road will be restored to pre-construction conditions in accordance with applicable permits and Caltrans requirements.

Two staging areas have been identified for this location, both of which are on the northbound side of SR 29, east and west of the bridge. The staging area on the east side of the bridge has an approximate area of 1,630 square feet, and the staging area on the west side of the bridge has an approximate area of 1,040 square feet. Staging areas will be used for equipment storage and stockpiling temporary materials. Materials containing possible contaminants such as fuels, lubricants, oils, or solvents, will be stored off-site or in sealable containers at designated locations per applicable permits and Caltrans requirements.

**Temporary Creek Diversion System**

Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge will require Temporary Creek Diversion Systems to divert creek flows for a dry work area during construction. The systems may consist of a diversion pipe with temporary cofferdams, areas that are pumped dry to allow for construction, located at the upstream and downstream ends. The cofferdams will be constructed across the existing creek channel with sand bags wrapped in impermeable plastic sheeting. A cut-off trench, a
trench below the foundation that is lined with an impervious material, will be provided at both the upstream and downstream cofferdams to reduce seepage into the construction work area.

Temporary dewatering, the removal of groundwater, may be required where subsurface excavation is performed below the ground water table. Dewatering and discharging activities shall be conducted per Caltrans requirements. Temporary protection mats will be installed to maintain dry working areas, protecting the creek beds in all three creeks.

Further details of the Temporary Creek Diversion Systems will be developed during the design phase.

**Stage Construction**

Construction activities for Garnett Creek Branch Bridge, Garnett Branch, and No Name Creek Bridge will take place during daytime hours and activities in the creek or near any aquatic habitat will be limited to the dry season window of June 15 to October 15. Construction activities, specifically within the creek bed for all three bridges, will be performed concurrently to stay within the dry season window, and will take approximately 50 working days. The total construction duration is anticipated to be approximately 90 working days, which includes construction activities outside of the creek bed.

During the construction window, vegetation clearing will be confined to a minimum for construction activities. Tree removal may be necessary. All ESAs are to be avoided by all construction activities, material and personnel. After construction is complete or after each successive construction cycle, creek bank and riparian habitat restoration may be necessary to fulfill the requirements of the National Marine Fisheries Service (NMFS) Programmatic Biological Opinion (BO), US Fish and Wildlife Service (USFWS) BO, and the CDFW 1600 permit.

The scheduled begin construction date is tentatively late 2021 and work is to be completed in one construction season.

**Garnett Creek Branch Bridge**

The anticipated sequence of construction activities is listed below:

- De-energize overhead utilities line prior to the beginning of construction
- Install construction area signs
- Build temporary creek flow diversion system
- Build access road downstream SE corner
- Place new cut-off wall at end of outlet apron
- Remove and replace existing wingwalls
- Add wingwall extensions (soldier pile wall) on CIDH
- Grade channel.
- Place RSP Class III and native creek bed materials
- Implement permanent erosion control and site cleanup

**Garnett Creek Bridge**

The anticipated sequence of construction activities is listed below:

- Relocate utilities line prior to the beginning of construction
- Install construction area signs
- Build temporary creek flow diversion system
- Build access road downstream SW corner
- Drill hole and inject grouting
- Place concrete pile cap
- Grade channel
- Place native creek bed materials
- Implement permanent erosion control and site cleanup

**No Name Creek Bridge**

The anticipated sequence of construction activities is listed below:

- De-energized utilities prior to the beginning of construction.
- Install construction area signs
- Build temporary creek flow diversion system.
- Build access road downstream
- Place and pressure grout micro-piles
- Excavate abutment areas
- Construct cutoff walls
- Add grout ports and place culvert contact grouting.
- Repair exposed rebar spalls with epoxy
- Grade channel.
- Implement permanent erosion control and site cleanup.

**Erosion Control**

Erosion control measures will be implemented to stabilize and revegetate disturbed areas, including the re-grading and de-compaction of staging areas and access roads. Erosion control measures on creek banks and other disturbed areas would include compost, hydroseeding with a locally-appropriate seed mix, hydromulch, and fiber rolls or netting as appropriate.
Standard temporary erosion control measures will be implemented on all disturbed soil areas (DSAs). All state/federal waters and wetlands will be protected from sediment and pollutant discharges in accordance with applicable laws, permits and Caltrans requirements.

Permanent erosion control measures, such as placing hydrosed and netting, will be applied to all impacted areas prior to construction completion. Contours and vegetation cover will be reestablished to pre-construction conditions in accordance with Caltrans requirements. All construction spoils and debris will be environmentally cleared for handling and disposing, and will be hauled to a permitted disposal site.

Tightly woven fiber netting or similar material shall be used for erosion control and other purposes at the project site to ensure that wildlife does not become trapped or entangled.

**Restoration**

Riparian habitat will be temporarily impacted by construction activities and will require mitigation planting at a 3:1 ratio.

After each successive construction cycle, creek bank and riparian habitat restoration may be necessary to fulfill the requirements of the NMFS Programmatic Biological Opinion (BO), USFWS BO, and the CDFW 1600 permit.

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 and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition with coordination with necessary resource agencies.

**Garnett Creek Branch Bridge**

During construction, vegetation clearing will be confined to the minimal area feasible within the project footprint, including the construction access roads and staging areas. Trees may be removed or trimmed as necessary in these areas.

**Garnett Creek Bridge**

During construction, vegetation clearing will be confined to the minimal area feasible within the project footprint, including the construction access roads and staging areas. One eucalyptus tree (Eucalyptus globulus), 15 feet from the bridge, along the northbound direction south of Garnett Creek, will be removed. In addition, five eucalyptus trees and/or stumps downstream within the 100-feet grading limits will also be removed.
**No Name Creek Bridge**

During construction, vegetation clearing will be confined to the minimal area feasible within the project footprint, including the construction access roads and staging areas. Trees may be removed as necessary in these areas. The exact number and location of trees needed for removal will be determined at design phase of the project.

**Right-of-Way (ROW) Requirements**

**Garnett Creek Branch Bridge**

Some construction related work for Garnett Creek Branch Bridge is anticipated to occur outside of Caltrans ROW. Permanent creek work will occur outside of Caltrans ROW, within a temporary construction easement (TCE) adjacent to the southbound side of SR 29, with an area of approximately 1,380 square feet. The two staging areas for this location are partially within both Caltrans ROW and Napa County ROW. The staging area closest to the bridge has approximately 2,836 square feet outside of Caltrans ROW. The second staging area has approximately 5,847 square feet outside of Caltrans ROW. Both staging areas will require TCEs for the areas outside of Caltrans ROW.

TCEs for these areas will be acquired during the design phase of the project.

**Garnett Creek Bridge**

Some construction related work for Garnett Creek Bridge is anticipated to occur outside of Caltrans ROW such as staging and storage areas, temporary creek diversion limits, and permanent grading. The staging area adjacent to the southbound side of SR 29, will extend approximately 110 feet beyond Caltrans ROW with an area of approximately 5,550 square feet. The temporary creek diversion and permanent grading limits adjacent to the southbound side of SR 29, will extend approximately 115 feet beyond Caltrans ROW with an area of approximately 8,050 feet square. The temporary creek diversion and permanent grading limits adjacent to the northbound side of SR 29, will extend approximately 65 feet beyond Caltrans ROW with an area of approximately 5,850 square feet.

TCEs for these areas will be acquired during the design phase of the project.

**No Name Creek Bridge**

Some construction related work for No Name Creek Bridge is anticipated to occur outside of Caltrans ROW for permanent creek work in two TCEs, one on the northbound side of SR 29, and one on the southbound side of SR 29, adjacent to the bridge. The TCE on the northbound side of SR 29, will extend approximately 40 feet beyond Caltrans ROW with an area of approximately 1,200 square feet, and the
TCE on the southbound side of SR 29, will extend approximately 45 feet beyond Caltrans ROW with an area of approximately 2,000 square feet.

TCEs for these areas will be acquired during the design phase of the project. See Figure 7 for a summary table of TCEs.

**Figure 7: Summary Table of Temporary Construction Easements**

<table>
<thead>
<tr>
<th>Napa County Assessor Parcel #</th>
<th>Bridge Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>017-051-001-000</td>
<td>No Name Creek Bridge</td>
</tr>
<tr>
<td>017-140-002-000</td>
<td>Garnett Creek Bridge</td>
</tr>
<tr>
<td>017-130-020-000</td>
<td>Garnett Creek Bridge</td>
</tr>
<tr>
<td>017-140-001-000</td>
<td>Garnett Creek Bridge</td>
</tr>
<tr>
<td>017-140-033-000</td>
<td>Garnett Creek Bridge</td>
</tr>
<tr>
<td>017-140-006-000</td>
<td>Garnett Creek Bridge</td>
</tr>
<tr>
<td>017-230-017-000</td>
<td>Garnett Creek Branch Bridge</td>
</tr>
<tr>
<td>017-230-015-000</td>
<td>Garnett Creek Branch Bridge</td>
</tr>
</tbody>
</table>

**Right-of-Way Summary**

No permanent right-of-way acquisition is required for this project. All work will occur within Caltrans right-of-way or TCEs.

The project will not result in the displacement of residents or businesses. However, ROW is anticipated to be acquired during the design phase of the project in the form of TCEs.
A. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED
The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 33 for additional information.

|☐| 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 |

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: ___________________________ Date: ___________________________
Printed Name: _____________________ For: ___________________________
Proposed Mitigated Negative Declaration
Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans) proposes a project to rehabilitate the following three bridges on State Route (SR) 29 in unincorporated Napa County to address scour damage: Garnett Creek Branch Bridge (Bridge No. 21-0111), Garnett Creek Bridge (Bridge No. 21-0005), and No Name Creek Bridge (Bridge No. 21-0100).

Determination
This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans’ intent to adopt an MND for this project. This does not mean that Caltrans’ decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

The Department has prepared an Initial Study for this project, and pending 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 effect on agriculture and forestry, air quality, geology/soils, hazards and hazardous materials, land use/planning, mineral resources, population/housing, public services, recreation, transportation/traffic, and utilities/service systems.

In addition, the proposed project would have less than significant effects to aesthetics, biological resources, cultural resources, hydrology/water quality, and noise.

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

- Compensatory mitigation for riparian habitat

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

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 indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance. Please note that content-based changes to the text from the draft environmental document to this final environmental document will be noted with a line in the right hand margin.

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

I. AESTHETICS: Would the project:

a) Have a substantial adverse effect on a scenic vista
   - No Impact

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
   - No Impact

c) Substantially degrade the existing visual character or quality of the site and its surroundings?
   - No Impact

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
   - No Impact

a) No Impact

Viewers and Viewer Response

Neighbors (people with views to the road) and highway users (people with views from the road) will be minimally affected by the proposed project.

Garnett Creek Branch Bridge

Neighbors’ and highway users’ view to the area of work is largely screened by slopes and vegetation. Overall, their exposure and sensitivity are expected to be low.

Garnett Creek Bridge

Neighbors’ sensitivity is expected to be elevated because of the historic status and picturesque quality of the bridge. There are four adjacent parcels with views to the bridge, in addition to
residents in the hills overlooking the bridge. These viewers have low to moderate exposure to the bridge due to partial obstruction of their views by existing vegetation, and low exposure to the new guardrails and anchor blocks. Highway users, whether car drivers, cyclists, truck drivers, or others, have limited exposure to the proposed project because much of the work will occur below the sightlines of motorists or cyclists, and motorists are expected to be traveling quickly. Work in the creek channel is not expected to be visible from the roadway, though vegetation removal will be observable in the short term. Only the new guardrail system is expected to be noticeable from the roadway, and the typical motorist’s exposure will be limited if they are traveling at or near the speed limit of 50 mph. Taken together, viewer response to work at Garnett Creek Bridge is expected to be moderate-low.

**No Name Creek Bridge**

Neither neighbors or highway users have clear views of the bridge or creek channel, making their exposure very low. Low sensitivity is expected for the small number of trees to be removed, making the overall viewer response at this site low.

**Summary**

Because the majority of the work is in creek channels and will be buried underground, both neighbors’ and highway users’ exposure is expected to be limited. Neighbors’ exposure and sensitivity to the project, however, is anticipated to be longer and higher than that of highway users. Neighbors will initially be exposed to construction noise and activities, and the removal of vegetation. Once the project is complete, existing and newly-installed vegetation are anticipated to fill in gaps where planting was removed, ultimately restoring the existing condition. Highway users, whether car drivers, cyclists, truck drivers, or others, have very limited exposure to the proposed project because so much of the work will occur below the sightlines of motorists or cyclists, and motorists are expected to be traveling quickly.

**b) Less Than Significant Impact**

**Visual Impacts**

**Garnett Creek Branch Bridge**

Visual impacts are anticipated to be low. As most of the repair work proposed is beneath the roadway, visual impacts would primarily result from construction, staging areas and tree/vegetation removal. Construction operations, especially at Garnett Creek Branch Bridge, would be visible to both Neighbors and Highway Users. Construction impacts will be temporary.

The new wing walls and rock slope protection would contrast initially with their surroundings, but are only expected to be visible to persons investigating the bridge. Any plant removal here would be noticed initially, but visual change would be reduced to negligible levels over time as the natural vegetation fills in the area and new materials age. Between the low viewer response and low level of resource change, the visual impact at Garnett Creek Branch is expected to be low.
**Garnett Creek Bridge**

The visual impacts at Garnett Creek Bridge have been studied in greater detail because of the bridge’s historic status and elevated viewer response. As it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of key views associated with visual assessment units that would most clearly demonstrate the change in the project’s visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the project considering exposure and sensitivity. In addition, these key views will be analyzed for each proposed alternative.

For this project, the following key views have been identified:

- **Key View 1**: Driver’s perspective approaching the bridge on southbound Route 29
- **Key View 2**: Driver or passenger’s view of the new guardrail and anchor block while traveling over the bridge
- **Key View 3**: View of the bridge from the private property to the south

The below map locates the key views that will be used to assess visual impacts of the proposed project.

![Map of key views](image)

Key View 1 represents the typical view of a highway user, encompassing the scenic, rural character of the area and the low profile of the stone bridge rails and metal guardrails. The change to the visual resources from this viewpoint is low, as the scenic quality of the landscape remains intact and the changes to the guardrail are relatively minor. From this location, the removal of the clump
of non-native eucalyptus trees on the left-hand side of the bridge opens the view to the mountainside beyond. The concrete blocks anchoring the guardrails would obscure small portions of the stone bridge, but aesthetic treatment of the concrete would minimize their visual impact. The replacement of the guardrail with consistent, dark-colored guardrail improves the unity of the scene.
Key View 2 represents a highway user’s view of the new concrete anchor blocks used to anchor the new MGS. The concrete anchor blocks and MGS would bring the bridge barrier up to current safety standards while protecting the original historic bridge rail. Context sensitive color and texture would be applied to both the concrete and metal portions of the guardrail to reduce contrast with the project site. These measures would reduce the visual resource change at this Key View to moderate-low.
Key View 3 was selected to illustrate a highway neighbor’s view of the proposed project. From this vantage point, one’s foreground view is focused on the arching forms of the historic bridge, while the background is composed of scenic mountain views. The change to visual resources at this Key View is very low, as the scenic quality of the vista will remain intact and the changes to the guardrail are very minor when viewed from this direction. The removal of the clump of eucalyptus trees opens up the view to the mountainside beyond, while the replacement of the guardrail with a single, dark colored material improves the unity of the scene.
No Name Creek Bridge

Visual impacts are anticipated to be low. As most of the repair work proposed is beneath the roadway, visual impacts would primarily result from construction, staging areas and tree/vegetation removal. Construction operations would be visible to both Neighbors and Highway Users. Construction impacts will be temporary.

Even with anticipated vegetation removal necessary to implement repairs, the dense groupings of existing trees would remain visually dominant. Considered with the low viewer response, visual impacts at the No Name Bridge are expected to be low.

Summary

Across all three Key Views, the elements contributing to visual impacts are the construction of the new guardrails with anchor blocks and the removal of vegetation within the creek. When the visual resource change (low to moderate-low) and viewer response (moderate-low) are considered for all three Key Views, the overall visual impact at this site is moderate-low. This level of impact is dependent, however, on inclusion of aesthetic treatments for the guardrails and concrete anchor blocks. Without these minimization measures, the visual impact could be elevated.

Temporary visual impacts from the construction of the proposed project would be typical of any bridge scour project of this scale, and are not considered to be substantial.
Based on the moderate-low and low visual impacts across all three sites, the proposed project is expected to have moderate-low visual impacts. The project as proposed would not adversely affect any “Designated Scenic Resource” as defined by CEQA statutes or guidelines, or by Caltrans policy.

**c) No Impact**

**Visual Resources and Resource Change**

*Visual Resources* in the project corridor are defined and identified by assessing *Visual Character* and *Visual Quality*. *Resource Change* is assessed by evaluating the differences in Visual Character and the Visual Quality of the Visual Resources that comprise the project corridor before and after construction of the proposed project. This is accomplished by anticipating conditions with the project in place before actual construction occurs.

Overall, the SR 29 corridor is visually surrounded by the mountains of the Coastal Range, which form the outer bounds of the project corridor. Defining characteristics of the project corridor include close-up views of the forested mountainsides, the repetitive pattern of adjacent vineyards, and the seasonality of the vines.

The Resource Change to these landscapes is predicted to be low. Both Visual Character and Visual Quality will remain unaffected by the project work. Across all three sites, the majority of the proposed work is below the roadway and will not be readily seen by motorists. The dominant and memorable views of mountains and vineyards will remain unaffected by the project, and the intactness and unity of the landscape will remain. Tree and shrub removal at and adjacent to the work areas will be the most visible aspect to all viewers.

**Garnett Creek Branch Bridge**

Below roadway work will be noticeable initially by viewers on Palisades Road and adjacent residential properties. One small oak tree adjacent to the southeast wing wall will need to be removed. As other vegetation is sporadic, the new wing walls and RSP will be somewhat visible initially, but will be more camouflaged over time as the area revegetates. Replacement of MBGR with new MGS at both Garnett Creek and Garnett Creek Branch will enhance visual unity within this portion of the corridor.

**Garnett Creek Bridge**

The removal of a clump of eucalyptus trees necessary for restoration of the creek channel north of the bridge will open up the view from the roadway, but this will not result in a change to the pattern or character of the corridor. Because the existing pattern of vegetation is irregular, the removal of trees and shrubs closest to the bridge would not adversely affect the intact visual quality in the long term. The historic character of Garnett Creek Bridge is visually evidenced by its rough-hewn stone masonry construction and arching structural supports, which will not be affected by the below-grade improvements. The preservation of the existing stone bridge, which is similar to a smaller arched stone bridge called the Greenwood Avenue Bridge, over Garnett Creek Branch 700 feet to the southeast, additionally supports visual unity. However, the new guardrails, and in particular,
the concrete anchor blocks used to secure the guardrails, will reduce the visibility of the stone bridge rails as viewed from the road. The existing guardrails vary in material, color, and attachment method, but replacement with new MGS at both Garnett Creek and Garnett Creek Branch will enhance visual unity within this portion of the corridor.

No Name Creek Bridge

At No Name Creek Bridge, tree and shrub removal at staging areas and access roads will be the most visible aspect to all viewers. Fewer than ten California Bay trees are likely to be removed in and near the creek channel, along with approximately four bigleaf maple trees. Both tree species are native but not listed as endangered or threatened.

As the vegetation surrounding the bridge locations are dense, removal of a few trees and shrubs. While the trees are noticeable initially, will go mostly unnoticed over time as existing vegetation fills in, screening the new structural repair work and eventually returning to the current level of visual character.

Summary

Across all three bridge sites, views to and from the roadway will remain similar to what exists today, with the exception being the details of the guardrails and the short-term removal of vegetation.

d) Less Than Significant Impact

Nighttime construction activities could add new sources of light and glare for residents, businesses, and local motorists along the project corridor. However, these new sources of light will be temporary during the construction period and will not contribute to long-term light impacts.

Avoidance and Minimization Measures

Avoidance or minimization measures have been identified and can lessen visual impacts caused by the project. This section describes additional avoidance and/or minimization measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect.

1. Minimize removal of large mature trees and shrubs to the greatest extent possible

2. Limit tree trimming by the Contractor to those required to provide a clear work area

3. Trees to be removed should be indicated on the plans during the Design phase after consultation with the Caltrans Landscape Associate.

4. Implement design exceptions where feasible to avoid removal of significant existing trees and vegetation
Aesthetics Resources Conclusion

Depending on the bridge location, the proposed project would have moderate-low to low long-term visual impacts to Highway Users and Neighbors along SR 29, in Napa County. No mitigation for negative visual impacts is anticipated if avoidance and minimization measures described above are implemented. Without the avoidance and minimization measures there could be resulting negative visual impacts from the incongruity of the new work in relation to the natural materials and colors of the historic bridge and rural setting. Overall, the project corridor will retain its rural character and scenic quality.

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

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? ☐ ☐ ☐ ☒

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

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? ☐ ☐ ☐ ☒

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

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

The proposed project, encompassing all construction related work for Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Bridge, is anticipated to have no impact to agriculture and forest resources. All construction related work will remain within Caltrans ROW or TCEs, and will therefore have no effect on converting farmland to non-agricultural use or conversion of forest land to non-forest use. There is no land under the Williamson Act in the project area, nor is there land zoned as forest land or timberland.
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>Impact</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</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>
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<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
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<td>e) Create objectionable odors affecting a substantial number of people?</td>
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</table>

The proposed project, encompassing all construction related work for Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Bridge, is not anticipated to have impacts to air quality resources.

The proposed project will have no effect on the implementation of an air quality plan, is exempt from the requirement for a conformity determination per 40 CFR 93.126 – Table 2, Exempt Projects – widening narrow pavements or reconstructing bridges (no additional travel lanes). The proposed project will not expose sensitive receptors to substantial pollutant concentrations, and will not create objectionable odors.

Short term air quality effects during the proposed project’s construction period will remain less than five years and should be regarded as temporary. Trucks and construction equipment emit methane (CH₄), carbon dioxide (CO₂), nitrous oxide (N₂O), and particulates. Most project-related pollution during construction will consist of wind-blown dust generated by excavation, grading, hauling and various other activities. The effects from these activities will vary from day to day as construction progresses. The Special Provisions and Standard Specifications will include requirements to minimize or eliminate dust during construction through the application of water or dust palliatives and other minimization measures.
IV. BIOLOGICAL RESOURCES: Would the project:

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

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?

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

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?

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?

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

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?

The biological study area (BSA) was established that consists of all areas of direct, indirect, temporary, and permanent impacts related to the project. This area was surveyed in the field and evaluated for potential effects to natural resources from the proposed project. The BSA consists of the project footprint and a buffer to account for potential impacts to sensitive habitats and protect plant and animal species from noise, vibration, dust, and other construction activities anticipated to occur. The total BSA for this project is 10.6 acres. The individual BSA acreages are listed below:

1. Garnett Creek Branch Bridge: 3.32 acres
2. Garnett Creek Bridge: 3.37 acres
3. No Name Creek Bridge: 3.9 acres
See Appendix D, Figures 8-10 on pages 107-109 for the BSAs per bridge location.

The proposed project will require the following permits:

<table>
<thead>
<tr>
<th>Regulatory Agency</th>
<th>Permit Required</th>
<th>Impacted Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>1602 Lake and Streambed Alteration Agreement</td>
<td>Garnett Creek Branch and Garnett Creek bed and bank and associated riparian habitat</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>1602 Lake and Streambed Alteration Agreement</td>
<td>No Name Creek bed and bank and associated riparian habitat</td>
</tr>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>Section 404 Clean Water Act Permit</td>
<td>Waters of the U.S.</td>
</tr>
<tr>
<td>San Francisco Bay Regional Water Quality Control Board</td>
<td>Section 401 Clean Water Act Permit</td>
<td>Waters of the U.S.</td>
</tr>
<tr>
<td>U.S. Fish and Wildlife Service</td>
<td>Biological Opinion</td>
<td>California red-legged frog, Northern spotted owl, California freshwater shrimp, and Burke’s goldfields</td>
</tr>
<tr>
<td>NMFS</td>
<td>Programmatic Biological Opinion</td>
<td>CCC DPS steelhead and critical habitat</td>
</tr>
</tbody>
</table>

a) Less Than Significant Impact

See Appendix D, Figure 11 on page 110, for the special status wildlife occurrences within 5 miles of the BSA.

See Appendix D, Figures 12-14 on pages 111-129 for species lists from the NMFS, USFWS, and California Native Plant Society (CNPS).

Garnett Creek Branch Bridge

Species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS within the BSA at the Garnett Creek Branch Bridge location include:

1. Burke’s goldfields
2. California red-legged frog
3. Migratory birds
**Burke’s Goldfields**

During field surveys, suitable vernal pool habitat for the goldfield was not identified. The presence of goldfields was also not found during floristic surveys.

**California Red-Legged Frog**

No frogs were observed in the BSA during field surveys on December 6, 2017 and February 9 and May 17, 2018.

**Migratory Birds**

Common migratory bird species were found flying overhead within the BSA. A few of these species include: red-shouldered hawk, red-tailed hawk, and California scrub-jay. Remnants of swallow nests were also observed under the Garnett Creek Branch Bridge, but no swallows were seen or heard during field surveys.

**Garnett Creek Bridge**

Species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and Wildlife or USFWS within the BSA at the Garnett Creek Bridge location include:

1. Burke’s goldfields
2. California red-legged frog
3. California freshwater shrimp
4. CCC DPS Steelhead
5. Migratory birds

**Burke’s Goldfields**

During field surveys, suitable vernal pool habitat for the goldfield was not identified. The presence of goldfields was also not found during floristic surveys.

**California Red-Legged Frog**

No frogs were observed in the BSA during field surveys on December 6, 2017 and February 9 and May 17, 2018.

**California Freshwater Shrimp**

The BSA is within the species’ dispersal distance from a known population approximately 0.75 miles downstream, and the species could potentially disperse through the site. A review of the California Natural Diversity Database (CNDDB) identified two documented shrimp occurrences within 5 miles of the BSA:
Occurrence of shrimp was reported 0.75 miles south of the BSA within Garnett Creek and Napa River. In 1990, 393 shrimp were captured within Garnett Creek, and 19 from Napa River.

Occurrence of shrimp was reported 4.5 miles west of the BSA. Shrimp were observed upstream from Franz Valley School Road Bridge upstream for about 0.5 mile.

Suitable habitat for the shrimp within the BSA and project footprint is marginal and located well above the ordinary high water mark. Additionally, Garnett Creek is anticipated to be dry during the dry season work window of June 15 to October 31.

Central California Coast (CCC) Distinct Population Segment (DPS) Steelhead

There are no recorded CNDDB occurrences of steelhead within 5 miles of the three bridges, however, steelhead have been recorded up-and downstream from SR 29, at Garnett Creek bridge, according to a separate study (Leidy et. al 2005).

Migratory Birds

Common migratory bird species were found flying overhead within the BSA. A few of these species include: red-shouldered hawk, red-tailed hawk, and California scrub-jay.

No Name Creek Bridge

Species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS within the BSA at the No Name Creek Bridge location include:

1. California red-legged frog
2. Northern spotted owl
3. Migratory birds

California Red-Legged Frog

No frogs were observed in the BSA during field surveys on December 6, 2017 and February 9 and May 17, 2018.

Northern Spotted Owl

According to the California Spotted Owl Viewer Database, the BSA is approximately 0.28 miles west of the closest owl occurrence. Field surveys indicate that potential suitable owl habitat north of SR 29, was burned as a result of wildfires that took place in October 2017. The area south of SR 29, within the action area was not burned, however presence of owls is not likely due to habitat fragmentation and prey dispersal.
**Migratory Birds**

Common migratory bird species were found flying overhead within the BSA. A few of these species include: red-shouldered hawk, red-tailed hawk, and California scrub-jay.

a) Summary

**Burke’s Goldfields**

Caltrans has determined that this project will not affect the goldfield. No individual plants, populations, sub-populations, or suitable habitat will be disturbed, destroyed, or directly removed by construction activities. The BSA does not contain the goldfield or suitable vernal pool habitat. Therefore, there will be no direct removal of the goldfield as part of this project.

No adverse cumulative impacts to special-status plant species or their habitats are anticipated as a result of this project.

**California Red-Legged Frog**

Caltrans has concluded that this project may affect, and is likely to adversely affect the frog with the USFWS per the Natural Environment Study (NES), completed in October 2018. Caltrans proposes to minimize construction related effects by implementing the project features and avoidance and minimization measures. However, incidental take still could occur as result of construction activities.

Construction activities, such as grading the creek channels, installing the creek diversion systems, vegetation removal, and equipment staging and access could result in take in the form of harassment, injury, or death of individual frogs from ground disturbance, unintentional entrapment, or temporary disruptions of normal behavior.

While the proposed project is likely to adversely affect the frog, the area of impact is small enough that the implementation of project features and AMMs will minimize potential adverse effects.

Per the NES and Biological Assessment, no compensatory mitigation for impacts to the frog is proposed as part of this project.

No adverse cumulative impacts are anticipated to the frog as a result of this project.

**California Freshwater Shrimp**

Caltrans has concluded that this project will have no effect on the shrimp. Caltrans proposes to minimize construction related effects by implementing the project features and AMMs.

Construction activities will not result in take of individual shrimp. Garnett Creek is anticipated to be dry during the seasonal work window of June 15 to October 15. Restoring disturbed locations
after construction ends to preconstruction conditions will reestablish aquatic and riparian habitat for the shrimp within one year of project completion.

Caltrans anticipates that compensatory mitigation for the shrimp will not be required.

No adverse cumulative impacts are anticipated to the shrimp or its habitat as a result of this project.

**Central California Coast Distinct Population Segment (CCC DPS) Steelhead**

Caltrans has determined that the impact to CCC DPS Steelhead due to Garnett Creek Bridge activity may affect, but will not adversely affect steelhead. The proposed action would result in direct temporary impacts on critical habitat for steelhead within the project limits, but is not likely to result in take of steelhead.

Potential impacts to steelhead may result from installing the temporary creek diversion system, dewatering Garnett Creek, removing vegetation from within the creek, and an increase in construction-related noise. However, no pile driving or other high-level sound generating activities are proposed for this project. Therefore, no harm due to noise is anticipated for CCC DPS Steelhead.

The impact to the species will be avoided by implementing the dry season work window of June 15 to October 15, when Garnett Creek has a high potential of being dry. If there are isolated pools caused by scour where fish may persist during dry season, Caltrans will recontour and level the creek bed with native material. Caltrans will also incorporate project features and AMMs. A complete list of AMMs can be found in Appendix C.

Approximately 0.14 acres of critical habitat (the creek bank and bed) will be temporarily impacted from the proposed project. Additional restoration activities include removing existing large debris from the creek bed and creek banks such as rocks and eucalyptus stumps, and riparian habitat replacement planting restoration will improve shading and protection of steelhead.

Caltrans does not propose any compensatory mitigation for this project for steelhead because the amount of habitat restored and enhanced by this project is anticipated to outweigh the amount of habitat temporarily impacted.

No adverse cumulative impacts are anticipated to steelhead or its habitat as a result of this project.

**Northern Spotted Owl**

Caltrans has determined that this project may affect, is not likely to adversely affect the owl. Caltrans has determined that the owl may occur in the project area, however, construction activities are consolidated into a single location and will occur during daytime hours only, and the scale of construction activities is relatively low.
Direct and indirect effects to the owl and owl habitat may occur as a result of this project, however, both effects are insignificant and discountable and thus not anticipated to rise to the level of take. Direct effects of the project include reducing the amount of potential roosting, nesting, and foraging habitat for the owl through the removal of mature trees and wood rat habitat. However, the relative expanse of habitat affected is minimal, adjacent to SR 29, and will be largely revegetated. Direct effects due to project related noise will be minimized by restricting construction activities to daytime hours, and thus avoid the primarily nocturnal foraging behavior of the owl.

Caltrans does not propose any compensatory mitigation for this project for owl.

No adverse cumulative impacts are anticipated to the owl or its habitat as a result of this project.

*Migratory Birds*

With the implementation of the project features and AMMs, impacts to migratory birds are not anticipated.

Caltrans does not propose any compensatory mitigation for this project for migratory birds.

No adverse cumulative impacts are anticipated to migratory birds or their habitat as a result of this project.

*b) Less Than Significant with Mitigation*

**Garnett Creek Branch Bridge**

Riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW and Wildlife or USFWS within the Garnett Creek Branch Bridge location include:

1. California Red-Legged Frog (CRLF) habitat
2. Riparian habitat

*California Red-Legged Frog Habitat*

The project is outside of frog critical habitat. The closest designated frog critical habitat is approximately 13 miles south of the BSA.

Garnett Creek Branch and Garnett Creek are ephemeral and do not contain slow-moving or stagnant water and vegetation suitable for attaching egg masses, which characterizes frog breeding habitat.
**Riparian Habitat**

The riparian corridors within the three bridge project areas could be used for dispersal, and may provide non-breeding habitat for CRLF that migrate from nearby breeding sites.

Garnett Creek Branch and Garnett Creek are ephemeral and do not contain slow-moving or stagnant water and vegetation suitable for attaching egg masses, which characterizes frog breeding habitat.

The riparian corridors within the three bridge project areas are not expected to be used for breeding but could be used for dispersal, and may provide non-breeding habitat for frogs that migrate from nearby breeding sites. Dispersal habitat features such as large rocks, downed trees, logs, and moderately dense vegetation are present in some areas of the BSA, and could provide cover for non-breeding frogs.

**Garnett Creek Bridge**

Riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW and Wildlife or USFWS within the Garnett Creek Bridge location include:

1. California freshwater shrimp habitat
2. California red-legged frog habitat
3. CCC DPS Steelhead habitat
4. Riparian habitat

**California Freshwater Shrimp Habitat**

Suitable habitat for the shrimp within the BSA and project footprint is marginal. This habitat is located well above the ordinary high water mark. Additionally, Garnett Creek is ephemeral, and is anticipated to be dry during the dry season work window of June 15 to October 15.

**California Red-Legged Frog Habitat**

The project is outside of frog critical habitat. The closest designated frog critical habitat is approximately 13 miles south of the BSA.

Garnett Creek Branch and Garnett Creek are ephemeral and do not contain slow-moving or stagnant water and vegetation suitable for attaching egg masses, which characterizes frog breeding habitat.

The riparian corridors within the three bridge project areas are not expected to be used for breeding but could be used for dispersal, and may provide non-breeding habitat for frogs that migrate from nearby breeding sites. Dispersal habitat features such as large rocks, downed trees, logs, and moderately dense vegetation are present in some areas of the BSA, and could provide cover for non-breeding frogs.
**CCC DPS Steelhead Habitat**

CCC DPS steelhead critical habitat only occurs within the Garnett Creek Bridge BSA. All aquatic habitat up to the ordinary high-water mark within Garnett Creek and all the adjacent, upland riparian areas are designated critical habitat.

The proposed action during construction would result in temporary impacts on critical habitat for steelhead within the Garnett Creek Bridge project limits. Impacts from the project include areas of vegetation clearing and grubbing within riparian areas along the banks of Garnett Creek.

Construction activities that will impact the creek bed include access to the creek, installing the temporary creek diversion system, dewatering the creek, drilling galvanized pipes below the creek bed surface to inject grout, constructing the concrete caps, and grading the creek bed.

Approximately 0.14 acres of critical habitat (the creek bank and bed) will be temporarily impacted from the proposed project. Additional restoration activities include removing existing large debris from the creek bed and creek banks such as rocks and eucalyptus stumps, and riparian habitat replacement planting mitigation which will improve shading and protection of steelhead.

Caltrans does not propose any compensatory mitigation for this project for steelhead because the amount of habitat restored and enhanced by this project is anticipated to outweigh the amount of habitat temporarily impacted.

No adverse cumulative impacts are anticipated to steelhead or its habitat as a result of this project.

**Riparian Habitat**

Riparian habitat areas will be used for staging and access during construction.

The riparian corridors within the three bridge project areas could be used for dispersal, and may provide non-breeding habitat for CRLF that migrate from nearby breeding sites. Dispersal habitat features such as large rocks, downed trees, logs, and moderately dense vegetation are present in some areas of the BSA, and could provide cover for non-breeding frogs.

Riparian habitat is also used by CA freshwater shrimp and steelhead for shade and cover.

Impacts to riparian habitat will be mitigated through on-site replacement planting at a 3:1 ratio.
No Name Creek Bridge

Riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW and Wildlife or USFWS within the No Name Creek Bridge location include:

1. California red-legged frog habitat
2. Northern spotted owl habitat
3. Pallid bat and Townsend’s big-eared bat habitat
4. Riparian habitat

California Red-Legged Frog Habitat

The project is outside of frog critical habitat and any designated recovery units. The closest designated frog critical habitat is approximately 13 miles south of the BSA.

The riparian corridors within the three bridge project areas are not expected to be used for breeding but could be used for dispersal, and may provide non-breeding habitat for frogs that migrate from nearby breeding sites. Dispersal habitat features such as large rocks, downed trees, logs, and moderately dense vegetation are present in some areas of the BSA, and could provide cover for non-breeding frogs.

Northern Spotted Owl Habitat

Field surveys indicate that potential suitable owl habitat north of SR 29, was burned as a result of wildfires that took place in October 2017.

Direct effects of the project include reducing the amount of potential roosting, nesting, and foraging habitat for the owl through the removal of mature trees and wood rat habitat, however, the relative amount of habitat affected is minimal, adjacent to SR 29, and will be largely revegetated.

Pallid Bat and Townsend’s Big-Eared Bat Habitat

The riparian habitat along No Name Creek in both directions provides the same quality of potential foraging habitat for the Pallid Bat and Townsend’s big-eared bat as the area immediately adjacent to the bridge.

A loss of foraging habitat for bats may occur during construction due to impacts to riparian habitat. The riparian habitat at No Name Creek with closed cover and dense understory and pools of water may provide suitable foraging habitat.

Riparian Habitat

The riparian corridors within the three bridge project areas could be used for dispersal, and may provide non-breeding habitat for CRLFs that migrate from nearby breeding sites. Dispersal habitat
features such as large rocks, downed trees, logs, and moderately dense vegetation are present in some areas of the BSA, and could provide cover for non-breeding frogs.

Riparian habitat is also used by bats as roosting and foraging habitat.

b) Summary

**California Freshwater Shrimp Habitat**

Caltrans has concluded that this project will have no effect on the shrimp. Caltrans proposes to minimize construction related effects by implementing the project features and AMMs. Restoring disturbed locations after construction ends to preconstruction conditions will reestablish aquatic and riparian habitat for the shrimp within one year of project completion.

Caltrans does not propose any compensatory mitigation for this project for the shrimp.

No adverse cumulative impacts are anticipated to the shrimp or its habitat as a result of this project.

**California Red-Legged Frog Habitat**

The project will temporarily impact approximately 0.63 acres of upland dispersal habitat and 0.05 acres of aquatic dispersal habitat.

Construction activities will temporarily prevent the frog from dispersing and taking refuge within the work area. Restoring disturbed locations after construction ends to preconstruction conditions will reestablish the aquatic, riparian, and upland habitat values for the frog within one year of project completion.

No compensatory mitigation is proposed as part of this project because temporary habitat effects will be offset through the on-site restoration of disturbed areas, such as re-grading and re-vegetation. Restoration activities will improve the quality of dispersal habitat from pre-construction conditions.

The project will also result in approximately 0.16 acres of permanent impacts to aquatic dispersal habitat and 0.3 acres to upland dispersal habitat. However, activities resulting in permanent impacts are beneficial to restore and enhance the area to natural conditions. These effects include recontouring the creek bed, levelling the sediment, removing large boulders, and implementing erosion control measures.

**CCC DPS Steelhead Habitat**

The proposed action would result in direct temporary impacts on critical habitat for CCC DPS steelhead within the project limits, but is not likely to result in take of CCC DPS steelhead.

Potential impacts to CCC DPS steelhead may result from installing the temporary creek diversion system, dewatering Garnett Creek, removing vegetation from within the creek, and an increase in construction-
related noise. No pile driving or noise generating activities are proposed for this project. Potential impacts to CCC DPS steelhead will be avoided and minimized through the implementation of a dry season work window of June 15 to October 15, when fish are not likely to be present within Garnett Creek.

The impact to the species will be avoided by implementing the dry season work window of June 15 to October 15 when Garnett Creek has a high potential of being dry, as well as incorporating other project features and AMMs. A complete list of AMMs may be found in Appendix C.

No CCC steelhead critical habitat will be adversely modified or destroyed because of the proposed project. Grading and restoring the creek bed post-construction can be considered an improvement over existing conditions, and there are no anticipated permanent impacts as a result of the project. The amount of habitat restored and enhanced by this project outweighs the amount of habitat temporarily impacted.

Caltrans does not propose any compensatory mitigation for this project for steelhead.

No adverse cumulative impacts to CCC steelhead critical habitat are anticipated as a result of this project.

**Northern Spotted Owl Habitat**

Direct and indirect effects to the owl and owl habitat may occur as a result of this project, however, both effects are insignificant and thus not anticipated to rise to the level of take.

The project will temporarily impact approximately 0.14 acres of habitat.

Caltrans does not propose to compensatory mitigation for this project for the owl.

No adverse cumulative impacts are anticipated to the owl or its habitat as a result of this project.

**Pallid Bat and Townsend’s Big-Eared Bat Habitat**

With the implementation of AMM’s, the proposed project is not anticipated to impact bat roosting or foraging habitat, and no compensatory mitigation is proposed.

No adverse cumulative impacts are anticipated as a result of this project.

**Riparian Habitat**

Construction activities will result in impacts to riparian habitat through tree removal.

Compensatory mitigation for temporary impacts to riparian trees will be provided through riparian habitat enhancement by onsite replacement plantings along the banks of Garnett Creek Branch, Garnett Creek, and No Name Creek. Permanent loss of riparian habitat is likely to require mitigation at a 3:1 ratio (habitat replaced: habitat loss). See Summary of planting ratios on page 59.
c) No Impact
There are no wetlands within the project footprint and BSA.

d) No Impact
The proposed project will not affect any migratory wildlife corridors, or the movement of any native resident or migratory fish or wildlife species. Native wildlife nursery sites will not be impeded.

e) Less Than Significant

See Appendix D, Figures 15-17 on pages 132-134 for tree removal per bridge location.

Per Ordinance No. 2018-01, the Napa County Watershed and Oak Woodland Protection Initiative of 2018, oak woodlands within the Agricultural Watershed zoning district are protected against removal. In situations where the retention of existing vegetation is found to be not feasible, the replacement of lost oaks will be at a minimum 3:1 ratio.

While tree removal in areas under CDFW jurisdiction is necessary for the proposed project, Caltrans will perform replacement planting.

Replacement planting will occur on-site within the project footprints for Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge.

**Garnett Creek Branch Bridge**

One valley oak tree and one California buckeye tree are anticipated to be removed from the Garnett Creek Branch Bridge project footprint, located downstream of the bridge adjacent to the southwestern wingwall.

For the single valley oak tree to be removed at this location, Caltrans will comply with Ordinance No. 2018-01 and perform replacement planting at a 3:1 ratio.

**Garnett Creek Bridge**

Within the Garnett Creek Bridge project footprint, one eucalyptus tree will be removed, adjacent to the northbound lane and approximately 15 feet from the bridge. Five other eucalyptus tree stumps, within the 100-foot grading limits and downstream of the bridge, will also be removed.

**No Name Creek Bridge**

Approximately four bigleaf maple and three California bay laurel trees will be removed within the No Name Creek Bridge project footprint downstream of the bridge. The 2017 wildfires affected the majority of the trees upstream of No Name Creek Bridge. Subsequently, tree removal crews removed the damaged trees prior to the tree surveys conducted on June 8, 2018.
Summary

Tree replacement planting ratios are as follows:

Valley Oak tree (upland vegetation habitat) - 3:1

California buckeye tree (riparian habitat) – 3:1

Bigleaf maple tree (riparian habitat) – 3:1

California bay laurel trees (riparian habitat) – 3:1

Eucalyptus trees (non-native) – 1:1

Caltrans does not anticipate any adverse cumulative impacts on trees as part of this project.

f) No Impact

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other similar plans applicable to the project site.

Avoidance and Minimization Measures

To reduce potential impacts to sensitive biological resources, Caltrans will incorporate general and species-specific AMMs into this project. A brief summary of these measures are included below. For further details on AMMs, see Appendix C: Avoidance, Minimization and Mitigation Measures.

1. Approved Biologist. The names and qualifications of the proposed bio monitor(s) will be submitted to the USFWS and CDFW for approval at least 30 calendar days prior to the start of construction.

2. Resident Engineer. At least 30 calendar days prior to ground disturbance, the RE’s name and telephone number will be provided to the USFWS and CDFW.

3. Worker Environmental Awareness Training. Prior to ground-disturbing activities, an agency-approved biologist will conduct an education program for all construction personnel.

4. Environmentally Sensitive Area Fencing. Prior to the start of 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 high-visibility orange fencing.
5. **Construction Site Management Practices.** Site restrictions will be implemented to avoid or minimize potential effects on listed species and their habitats.

6. **Migratory Birds and Nest Avoidance.** During the nesting season (February 1 through September 30), pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance. The distance of the non-disturbance buffer will be determined by the biological monitor through agency coordination.

7. **Biological Monitoring.** At least 30 days prior to the onset of activities, the name(s) and credentials of biologists who will conduct preconstruction surveys and relocation activities for the listed species will be submitted to the USFWS and CDFW. No project activities will begin until the proponent has received written approval from the agencies that he/she is approved to conduct the work. An agency-approved biologist will be present onsite during the construction of any erosion control fencing or cofferdams, and prior to and during the dewatering activities to monitor for the frog.

8. **CRLF: Covered Excavation Areas.** To prevent the inadvertent entrapment of the CRLF, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals by the biological monitor.

9. **Wildlife Exclusion Fencing.** Prior to the start of construction, the project footprint will be delineated, where necessary, with temporary, high-visibility wildlife exclusion fencing to prevent the inadvertent encroachment of the CRLF and other wildlife into the project footprint. The fencing will be maintained throughout the duration of the project and removed only when all construction equipment is removed from the job site.

10. **USFWS Site Access.** If requested, before, during, or upon completion of groundbreaking or any construction activities, Caltrans will allow access by USFWS personnel into the project footprint to inspect the project and its activities.

11. **Burke’s Goldfield: Pre-Construction Surveys.** Pre-construction surveys will be implemented within the suitable habitat mapped in the action area and depicted in the rare plant report map set. The timing of pre-construction surveys is to be specified in the pending Biological Opinion. If an endangered plant is found, ESA fencing will be placed around the area to ensure the areas will be avoided.

12. **CRLF: Pre-Construction Surveys.** Pre-construction surveys for the CRLF will be conducted by the USFWS-approved biologist no more than 20 calendar days prior to any initial ground disturbance and immediately prior to ground-disturbing activities, including vegetation removal, beyond the existing pavement.
13. **CRLF: Prevention of Entrapment.** If at any time a trapped listed animal is discovered, the biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape, or the USFWS will be contacted by telephone for guidance. The USFWS will be notified of the incident by telephone and electronic mail within one working day.

14. **CRLF: Protocol for Species Relocation and Reporting.** If frogs are encountered in the immediate work area, specified procedures will be followed for their safe relocation.

15. **Northern Spotted Owl: Vegetation Removal.** Should vegetation removal occur during the owl’s breeding season (Feb 1 through Sep 30), a USFWS-approved biologist will conduct protocol surveys. The timing of protocol surveys will be determined in the pending Biological Opinion.

16. **CA Freshwater Shrimp:** As required under FESA, Caltrans will implement reasonable and prudent measures to minimize and avoid the potential take of the shrimp. Caltrans will incorporate the project features and AMMs for the shrimp.

17. A biologist(s) will conduct pre-construction bird nesting surveys 72 hours prior to the beginning of construction. With the exception of nests of listed bird species and eagles, inactive nests will be removed to deter birds from re-establishing nests within the project area. Caltrans will remove unoccupied bird nests during the non-nesting season (October 1 to January 31) prior to or during construction.

18. To the greatest extent feasible, all major tree removal will be conducted between October 1 and January 31, prior to the onset of winter rains, outside the Northern spotted owl’s nesting season and during the later portion of the owl’s breeding season (February 1 to September 30) and one year prior to the start of construction activities. Trees will be stumped and roots left in place until construction commences the following year.

19. If clearing and grubbing occurs between May 1 and September 1, an agency approved bat biologist(s) will conduct visual and acoustic bat surveys for roosting bats, or evidence of roosting bats prior to construction. The bat biologist(s) will visually inspect tree foliage, bark, and cavities, and any other structures that could provide roosting habitat for bats. Work will stop if a maternity roost is discovered, and Biologist(s) will establish a 100-foot buffer around the roost.

**Biological Resources Conclusion**

The proposed project is isolated in nature and will not result in any permanent loss in habitat supporting endangered species. Additionally, Caltrans has not identified any non-federal projects expected to occur within the action area in the foreseeable future. As such, this project is unlikely to result in cumulative effects on listed species or their designated critical habitats. With implementation of the AMMs described above, the project will make no measurable contribution to cumulative impacts.
Compensatory mitigation will be required for temporary impacts to riparian habitat. This will occur in the form of on-site replacement planting at a 3:1 ratio.

<table>
<thead>
<tr>
<th>V. CULTURAL RESOURCES: Would the project:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</td>
</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
</tr>
<tr>
<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
</tr>
</tbody>
</table>
The archaeological and architectural history Area of Potential Effect (APE) consist of two discontinuous locations. One area surrounds the Garnett Creek Bridge and Garnett Creek Branch Bridge, and the second area surrounds No Name Bridge. The APE includes all proposed project activities as well as proposed new right of way and temporary constructions easements.

Three built resources were identified within the APE: Garnett Creek Bridge, Bennett-Bentley House (3003 Lake County Highway, Calistoga, CA) and No Name Creek Bridge.

a) Less Than Significant Impact

**Garnett Creek Branch Bridge**

The State Historic Preservation Officer (SHPO), has concurred with Caltrans’ determination that Garnett Creek Branch Bridge is not eligible for the National Register of Historic Places (NRHP). The project will not result in an adverse effect to the bridge.

The Bennett-Bentley House is within the APE at Garnett Creek Branch Bridge, and was determined to be eligible for inclusion in the NRHP. The house embodies the distinctive characteristics of the vernacular hall and parlor style of architecture, including a centrally located door flanked by windows, a steeply pitched roof, and interior floorplan of two rooms connected by a doorway, which is uncommon in both the Calistoga, Napa County area, and California in general. Additionally, the building has some elements of the Greek Revival style. The Bennett-Bentley House retains a high degree of integrity, maintaining its association, location, setting, feeling, design, materials and workmanship.

There will be no adverse effect to the Bennett-Bentley House. While the house is situated within the APE, it is outside the boundaries of the project footprint and will not be directly or indirectly impacted by the project.

**Garnett Creek Bridge**

Garnett Creek Bridge, originally built in 1902 as a single span bridge and updated in 1914 as a 3-span bridge, is listed on the NRHP. The bridge retains a high degree of integrity including location, design, setting, materials, workmanship, and association. The bridge represents the stone masonry arch, a rare type and method of construction in the state of California.

There will be no adverse effect to Garnett Creek Bridge as a result of the proposed project.

**No Name Creek Bridge**

No Name Creek Bridge is determined not eligible for inclusion in the NRHP.

b) No Impact

Garnett Creek Branch Bridge and Garnett Creek Bridge have a high sensitivity for both surface and buried prehistoric archaeological resources, while No Name Creek Bridge has a low sensitivity for both surface and buried prehistoric archaeological resources. However, no archaeological resources were identified within the APE.

c) No Impact

Although bedrock is Pleistocene Sonoma Volcanic, a potentially paleontologically sensitive unit, the project will not include excavation into bedrock. There are no sensitive paleontological resources that will be affected by the proposed project.
d) No Impact

There are no human remains within the APE.

Cultural Resources Impact Summary

Caltrans has determined that the project as a whole will have No Adverse Effect with Standard Conditions – Secretary of Interior Standards.

The project will have No Substantial Adverse Change to the Bennett-Bentley House or Garnett Creek Bridge.

Avoidance and Minimization Measures

1. Caltrans Resident Engineer will inform the Caltrans PQS Architectural Historian of any proposed project changes pre-construction.

2. Caltrans Resident Engineer will notify Caltrans PQS Architectural Historian at least three weeks in advance of construction.

3. Caltrans PQS Architectural Historian, Caltrans Resident Engineer, Caltrans Project Manager and Contractor will have a field meeting prior to the beginning of construction to discuss the character defining features of the Garnett Creek Bridge and the importance of the SOIS.

4. Caltrans Resident Engineer will inform the Caltrans PQS Architectural Historian of any proposed project changes during construction.

5. The Caltrans Resident Engineer will inform the Caltrans PQS Architectural Historian when construction is complete.

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.

   □ □ □  ❌

   ii) Strong seismic ground shaking?

   □ □ □  ❌

   iii) Seismic-related ground failure, including liquefaction?

   □ □ □  ❌
iv) Landslides?

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 off-site 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?

The proposed project will not impact geologic or soil conditions. Although bedrock is Pleistocene Sonoma Volcanic, a potentially paleontologically sensitive unit, the project will not include excavation into bedrock. There are no sensitive geologic, paleontological, or mineral resources that will be affected by the proposed project. There is no additional impact to the public from earthquakes, landslides, liquefaction, or other geologic hazards.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas 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

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (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), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.¹ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.² 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: “greenhouse gas mitigation” and “adaptation.” Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or “mitigate” the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

**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 (NEPA) (42 United States Code [USC] 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.³ This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”⁴ 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 will assist in decision-making and improve efficiency at the program level, and will 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.

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

Energy Policy and Conservation Act of 1975 (42 USC 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 (CAFE) program on the basis of each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). 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, U.S. 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.

U.S. 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 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 that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty

5 https://one.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy
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 rules’ long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. 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.6

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 will 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 and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) 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.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (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 Assembly Bill 32 in 2006 and SB 32 in 2016.

Assembly Bill 32 (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 ARB 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 ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) 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. ARB re-adopted the LCFS 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.

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

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

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

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, 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.

Executive Order B-30-15 (April 2015) 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 ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCCO₂e). Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32 (SB 32), Chapter 249, 2016, 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 ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. The second updated plan, California’s 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32.
The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the updated Scoping Plan, ARB released the GHG inventory for California.\(^7\) ARB is responsible for maintaining and updating California’s GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure ## represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO\(_2\)e.\(^8\) The 2018 edition of the GHG emissions inventory found total California emissions of 429 MMTCO\(_2\)e for 2016.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO\(_2\)e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO\(_2\)e.

\(^{2020\text{ Business as Usual (BAU) Emissions Projection 2014 Edition}}\)

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\(^7\) 2018 Edition of the GHG Emission Inventory released (July 2018).
https://www.arb.ca.gov/cc/inventory/data/data.htm

\(^8\) The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)
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.\(^9\) 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.

Operational Emissions

The purpose of this project is to address scour damage to the structural elements of Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge. The proposed project is not a capacity increasing project and is not anticipated to have any increase in operational GHG emissions as a result.

Construction Emissions

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

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.

The analysis was focused on vehicle-emitted GHG and carbon dioxide (CO\(_2\)) emissions which is the single most important GHG pollutant due to its abundance when compared with other vehicle-emitted GHG, including methane (CH\(_4\)), nitrous oxide (N\(_2\)O), hydrofluorocarbon (HFCs) and black carbon (BC).

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\(^9\) 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 US Forest Service (*Climate Change Considerations in Project Level NEPA Analysis*, July 13, 2009).
Construction-related GHG emissions were calculated using the Road Construction Emissions Model (RCEM), version 8.1.2, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that for a construction duration of 4.5 months, the total amount of CO\(_2\) produced for the construction of all three bridges would be 336.39 tons. The table below summarizes the construction related emissions, including the total CO\(_2\)-e emission.

### Summary of Construction Related GHG Emissions

<table>
<thead>
<tr>
<th>BRIDGE</th>
<th>PARAMETERS</th>
<th>PROJECT TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CO(_2) (tons)</td>
<td>CH(_4) (tons)</td>
</tr>
<tr>
<td>Garnett Creek</td>
<td>137.67</td>
<td>0.02</td>
</tr>
<tr>
<td>Garnett Creek Branch</td>
<td>66.58</td>
<td>0.01</td>
</tr>
<tr>
<td>No Name Creek</td>
<td>132.14</td>
<td>0.02</td>
</tr>
<tr>
<td>TOTAL</td>
<td>336.39</td>
<td>0.05</td>
</tr>
</tbody>
</table>

\(^{1}\) Gases are converted to CO\(_2\)-e by multiplying by their global warming potential (GWP). Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO\(_2\)).

Construction emissions will be unavoidable, but temporary.

**CEQA Conclusion**

While the project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans’ determination 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, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

**Greenhouse Gas Reduction Strategies**

**Federal Efforts**

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011\(^{10}\), 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

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\(^{10}\) [https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience](https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience)
water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation 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 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.”

To further the DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*). 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 in order 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.

**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). 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.

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12 https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm
13 https://www.fhwa.dot.gov/environment/sustainability/resilience/
The Governor’s Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

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 carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB 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 California Transportation Plan (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 (Liu 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 MPOs 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 will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT 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 (2013).

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

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

**Adaptation Strategies**

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

**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) 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 (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (Dec 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).

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 (CO-CAT), 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.”

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 towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

---

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

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

<table>
<thead>
<tr>
<th>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
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<th>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?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>No Impact</th>
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<th>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>No Impact</th>
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<tr>
<th>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?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>No Impact</th>
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<tr>
<th>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?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
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<tr>
<th>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?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>No Impact</th>
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<tr>
<th>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>No Impact</th>
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</table>
a) No Impact

Construction vehicles and equipment may leak oils, grease, and other fluids. These and other fluids, used for construction, have the potential to seep into the groundwater or be washed away by surface water runoff and make their way into Garnett Creek Branch, Garnett Creek, and No Name Creek. Caltrans will apply the requirements from the existing National Pollutant Discharge Elimination System permit and the Construction General Permit, along with standard BMPs for construction site management, to address hazardous waste from construction activities.

b) No Impact

Based on the project scope and preliminary investigations, there is no potential for release of hazardous materials into the environment.

c) No Impact

The project is not located within 0.25 mile of an existing or proposed school.

d) No Impact

The project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) No Impact

The project is not located within an airport land use plan or within two miles of a public airport or public use airport.

f) No Impact

The project is not located within the vicinity of a private airstrip.

g) No Impact

The project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

h) The project would not expose people or structures to any risk involving wildlands.

Avoidance and Minimization Measures

1. Caltrans will apply the requirements from the existing National Pollutant Discharge Elimination System permit and the Construction General Permit, along with standard BMPs for construction site management, to address hazardous waste from construction activities.
### IX. HYDROLOGY AND WATER QUALITY

Would the project:

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<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tr>
<td>a) Violate any water quality standards or waste discharge requirements?</td>
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<tr>
<td>b) 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) 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 off-site?</td>
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<tr>
<td>d) 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 off-site?</td>
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<td>e) 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>
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<td>f) Otherwise substantially degrade water quality?</td>
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<td>g) 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>
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<td>h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
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<tr>
<td>i) 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>
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<td>j) Inundation by seiche, tsunami, or mudflow</td>
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The proposed project will require the following water quality permit:

1. Clean Water Act 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board

**a) No Impact**

There would be no violations to any water quality standards or waste discharge requirements. Discharging activities will be conducted per Caltrans requirements.
b) No Impact

Dewatering, or creek diversion systems, will be required at all three bridge locations throughout construction, and will be conducted per Caltrans requirements. Temporary protection mats will be installed to maintain dry working areas and to protect the creek beds. Details of the dewatering systems will be further developed in the design phase.

Dewatering systems will be removed once construction is complete, allowing water to once again flow freely through Garnett Creek Branch, Garnett Creek, and No Name Creek.

These activities will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

c) No Impact

Existing drainage patterns at all three bridge locations will not be substantially altered and will not result in substantial erosion or siltation.

Dewatering will be required within the three creeks, but will be temporary during construction. The project will utilize standard Caltrans BMPs to address erosion impacts during construction. Additional erosion control measures will be developed in the design phase and implemented during construction. The Contractor may be required to develop and implement a Caltrans approved erosion control plan.

Existing erosion damage caused by scour will be repaired and further prevented by the proposed project at all three locations. Impacts to erosion from the proposed project would be beneficial.

d) No Impact

Existing drainage patterns at all three bridge locations will not be substantially altered and will not result in flooding on or off-site.

e) No Impact

The proposed project will not add new impervious area and will not be creating or contributing runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

The project will utilize temporary construction site BMPs to reduce pollutants in storm water and non-storm water discharges throughout construction.

f) Less than Significant Impact

The proposed project will impact other Waters of the U.S. Overall, temporary direct impacts will result from the project staging, dewatering and creek diversion activities and construction access to the creek bed. The project is anticipated to temporarily impact a total of approximately 0.05
acres of potential jurisdictional waters of the U.S. Permanent direct impacts will result from creek bed grading. The project will result in 0.17 acres of permanent impacts to waters of the U.S. Total impacts to waters of the U.S. are greater than 1/10 of an acre.

Caltrans has minimized project related impacts to the greatest extent feasible. Caltrans will implement AMMs to minimize potential effects to waters of the U.S. and other sensitive habitats within the project area.

Caltrans has worked to ensure that impacts to waters are avoided and minimized to the maximum extent practicable, such as reducing the construction access and equipment staging footprints, installing ESA fencing, implementing seasonal work windows, and erosion control BMPs to protect waters of the U.S.

Caltrans will apply the requirements from the existing National Pollutant Discharge Elimination System permit and the Construction General Permit to address hazardous waste from construction activities.

Additionally, the project will utilize temporary construction site BMPs to reduce pollutants in storm water and non-storm water discharges throughout construction. A 401 permit is required for this project and permanent treatment and design pollution prevention BMPs are proposed.

**g) No Impact**

There are no base floodplains in the project area. Therefore, there will be no impacts to housing in any 100-year flood hazard areas.

**h) No Impact**

There are no base floodplains in the project area. Therefore, there will be no impacts to structures in any 100-year flood hazard areas which would impeded or redirect flows.

**i) No Impact**

There are no base floodplains in the project area. Therefore, there will be no impacts to people or structures from flooding.

**j) No Impact**

The project is not located in an area that would be subject to inundation by seiche, tsunami, or mudflow.
Avoidance and Minimization Measures

1. The project will implement Temporary Construction Site BMPs to reduce pollutants in storm water and non-storm water discharges throughout construction

2. The project will implement Permanent Design Pollution Prevention BMPs

3. The project will develop and implement Permanent Erosion Control BMPs

4. The project will implement Permanent Treatment BMPs

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<tr>
<th>X. LAND USE AND PLANNING: Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<td>a) Physically divide an established community?</td>
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<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>
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a) No Impact

The project area is predominantly rural, with some residential and winery properties adjacent to SR 29. No new structures are being constructed by the proposed project that would physically divide an established community. New structures would be contained within the creek bed and creek banks at Garnett Creek Branch, Garnett Creek, and No Name Creek.

b) No Impact

The proposed project is consistent with the California Transportation Plan 2040, 2008 Napa County General Plan, and Countywide Vision Plan 2040.

However, as referenced under Project Description: Pedestrian and Bicycle Facilities, the Napa Countywide Bicycle Plan Update: Draft Bicycle Facility Map (May 2018) proposes SR 29, from Tubbs Lane to the Lake County border as a Class III rural bike route, and SR 29, from Silverado Trail/Lincoln Ave/Lake St to Tubbs Lane to have Class II bike lanes.

No Name Creek Bridge is within the proposed Class III rural bike route and will require bike route signage. Garnett Creek Branch Bridge and Garnett Creek Bridge are within the limits of the proposed Class II bike lanes; however, the project scope focuses on repairing scour damage at the three bridges. Therefore, no improvements to pedestrian, bicycle, or other non-motorized facilities within the project corridor are proposed.

There are no existing dedicated pedestrian, bicycle, or other non-motorized facilities within the project corridor. SR 29, within the project limits lacks standard shoulders for use by pedestrians and non-motorized users. Except for upgrading guardrails, there will be no permanent roadway work on SR 29.

Therefore, the proposed project will not worsen current bicycle, pedestrian and other non-motorized access.

c) No Impact

As referenced under the Biological Resources section, there are no Habitat Conservation Plans, Natural Community Conservation Plans, or other similar plans applicable to the project site.
**XI. MINERAL RESOURCES:** Would the project:

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<th>Potential Impact</th>
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<tr>
<td>Potentially Significant Impact</td>
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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?  

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?  

There are no mineral resources that will be affected by the proposed project.

**XII. NOISE:** Would the project result in:

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<tr>
<td>Potentially Significant Impact</td>
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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?  

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

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  

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?  

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?
a) Less Than Significant Impact

The proposed project will not introduce new noise impacts or permanently increase existing noise levels. Construction noise will be temporary and periodic. Noise associated with construction is controlled by Caltrans Standard Specification, Section 14-8.02, Noise Control and is not subject to local noise ordinances.

b) Less Than Significant Impact

Vibration impacts may result from grout injection activities at Garnett Creek Bridge. Construction groundborne vibration and noise will be temporary and periodic.

c) No Impact

All noise impacts are temporary and associated with construction. The proposed project will not introduce a permanent increase in noise levels.

d) Less Than Significant Impact

Construction noise will be temporary and periodic. Noise associated with construction is controlled by Caltrans Standard Specification, Section 14-8.02, Noise Control.

e) No Impact

The project is not located within an airport land use plan, and is not within two miles of a public airport or public use airport.

f) No Impact

The project is not located within the vicinity of a private airstrip.

Avoidance and Minimization Measures

1. Combine noisy operations to occur within the same time period. The total noise level will not be significantly greater than the level produced if operations are performed separately.

2. Avoid unnecessary nighttime idling of internal combustion engines within 100 feet of sensitive receptors.

3. Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.

4. Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.

5. Properly maintain all internal combustion engines to minimize noise generation.
XIII. POPULATION AND HOUSING: Would the project:

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)?

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

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

The project will not add travel lanes to SR 29, and is therefore not a capacity increasing project. The project is not growth inducing, nor will it displace any housing units or people.

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?
Construction of the project will not result in the provision of new or physically altered governmental facilities. The project also will not result in a need for new or physically altered governmental facilities, including fire protection, police protection, schools, park, and other public facilities.

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<th>Potential Impact</th>
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<th>Less Than Significant Impact with Mitigation</th>
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**XV. RECREATION:**

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?  
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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?  
☐ ☐ ☐ ☒
a) No Impact

**Garnett Creek Branch Bridge**

There are no existing neighborhood parks, regional parks, or other recreational areas near the project area.

At its closest point, the Napa River is approximately one half mile west of Garnett Creek Branch Bridge. In general, the Napa River and the surrounding watershed provide many recreational opportunities including swimming, whitewater kayaking and rafting, canoeing, fishing, motorboating, hiking, and wildlife viewing.

All construction related work will occur within Caltrans ROW or temporary construction easements.

**Garnett Creek Bridge**

There are no existing neighborhood parks, regional parks, or other recreational areas near the project area.

At its closest point, the Napa River is approximately one sixth of a mile west of Garnett Creek Bridge. In general, the Napa River and the surrounding watershed provide many recreational opportunities including swimming, whitewater kayaking and rafting, canoeing, fishing, motorboating, hiking, and wildlife viewing.

All construction related work will occur within Caltrans ROW or temporary construction easements.

**No Name Creek Bridge**

At its closest point, the Napa River is approximately one sixth of a mile west of No Name Creek Bridge. In general, the Napa River and the surrounding watershed provide many recreational opportunities including swimming, whitewater kayaking and rafting, canoeing, fishing, motorboating, hiking, and wildlife viewing.

At its closest point, Robert Louis Stevenson State Park is approximately one third of a mile north of No Name Creek Bridge. The park contains Mount Saint Helena, a peak in the volcanic Mayacamas Mountains, and offers hiking trails and scenic vistas.

All construction related work will occur within Caltrans ROW or temporary construction easements.

**Conclusion**

While work will be done and stream diversions plans implemented within Garnett Creek Branch, Garnett Creek, and No Name Creek, all of which feed into the Napa River, these activities will be during the dry season and will be temporary during construction.
Proposed activities to repair scour damage at the three bridge sites is not anticipated to increase the use of any recreational resources, during or post construction.

b) No Impact

No recreational facilities are proposed as a part of this project, and the project will not require the construction of new recreational facilities or expansion of existing recreational facilities.

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<th>XVI. TRANSPORTATION/TRAFFIC: Would the project:</th>
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<tr>
<td>a) 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>
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<tr>
<td>b) 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>
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<tr>
<td>c) 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>
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<tr>
<td>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
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<td>e) Result in inadequate emergency access?</td>
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<tr>
<td>f) 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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</tbody>
</table>
a) No Impact

As referenced under Land Use and Planning, the proposed project does not conflict with the California Transportation Plan 2040, 2008 Napa County General Plan, and Countywide Vision Plan 2040.

As referenced under Project Description: Pedestrian and Bicycle Facilities The 2018 Napa Countywide Bicycle Plan Draft Bicycle Facility Map proposes SR 29, from Tubbs Lane to the Lake County border as a Class III rural bike route, and SR 29, from Silverado Trail/Lincoln Ave/Lake St to Tubbs Lane to have Class II bike lanes. No Name Creek Bridge is within the proposed Class III rural bike route. Garnett Creek Bridge and Garnett Creek Branch Bridge are within the limits of the proposed Class II bike lanes. The bicycle and pedestrian needs for this region will be addressed with a widening project in the future. This project merely focuses on scour preventative measures for three bridges.

Currently, SR 29, within the project limits lacks standard shoulders for use by pedestrians and non-motorized users, however the segment of SR 29, north of Calistoga is regularly used by bicyclists for tourist and recreational trips. However, during construction Caltrans will take measures to accommodate the tourist and recreational bikers. Please see Pedestrian and Bicycle Facilities on page 22.

b) No Impact

This is not a capacity increasing project, and aside from upgrading MBGR to MGS, will perform no permanent work on the existing roadway. Therefore, the project will have no effect on congestion management programs.

c) No Impact

The project will not impact air traffic patterns.

d) No Impact

The project will not substantially increase hazards due to a design feature or incompatible uses.

e) No Impact

SR 29, will be open to traffic during construction by implementing one lane traffic control. The project will not result in inadequate emergency access.

f) No Impact

As referenced under Land Use and Planning, the proposed project does not conflict with the California Transportation Plan 2040, 2008 Napa County General Plan, and Countywide Vision Plan 2040.
As referenced under Project Description: Pedestrian and Bicycle Facilities The 2018 Napa Countywide Bicycle Plan Draft Bicycle Facility Map proposes SR 29, from Tubbs Lane to the Lake County border as a Class III rural bike route, and SR 29, from Silverado Trail/Lincoln Ave/Lake St to Tubbs Lane to have Class II bike lanes. No Name Creek Bridge is within the proposed Class III rural bike route and will require bike route signage. Garnett Creek Bridge and Garnett Creek Branch Bridge are within the limits of the proposed Class II bike lanes; however, the project scope focuses on repairing scour damage at the three bridges. Therefore, no improvements to pedestrian, bicycle, or other non-motorized facilities within the project corridor are proposed.

There are no existing dedicated pedestrian, bicycle, or other non-motorized facilities within the project corridor. SR 29, within the project limits lacks standard shoulders for use by pedestrians and non-motorized users.

The proposed project will not degrade existing bicycle, pedestrian and other non-motorized access.

The proposed project will be repairing and preventing future scour damage at Garnett Creek Branch Bridge, Garnett Creek Bridge, and No Name Creek Bridge, along with updating MBGR to MGS. The scope of work will not be impacting existing roadway conditions. Therefore, the performance and safety of public transit, bicycle, and pedestrian facilities will not be impacted.

Safety will, in fact, be improved on by upgrading existing MBGR to MGS at Garnett Creek Branch Bridge and Garnett Creek Bridge.

Bicycle travel will be accommodated during construction by providing the “Share the Road”, “Bikes May Use Full Lane” and “Pass Bikes 3FT Min” signs within the project limits to allow bicyclists to use the travel lanes with motorists.

<table>
<thead>
<tr>
<th>XVII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potentially Significant Impact</td>
</tr>
</tbody>
</table>
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

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

a) No Impact

To tribal cultural resources have been identified within the project vicinity.

b) No Impact

To tribal cultural resources have been identified within the project vicinity.

<table>
<thead>
<tr>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

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?

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?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

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?

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

g) Comply with federal, state, and local statutes and regulations related to solid waste?
a) No Impact
The project is not expected to exceed wastewater treatment requirements of the San Francisco Bay (Region 2) Regional Water Quality Control Board.

b) No Impact
The project does not require or result in the construction of new water or wastewater treatment facilities, or the expansion of existing facilities.

c) No Impact
The project does not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.

d) No Impact
The project does not require water supplies to serve the project from existing entitlements or where the project would impact new or expanded entitlements.

e) No Impact
The project does not require the services of a wastewater treatment provider where the project would impact the capacity of the provider.

f) No impact
The project does not require the services of a landfill where the project would impact the capacity of a landfill.

g) No Impact
The project is anticipated to comply with federal, state, and local statutes and regulations related to solid waste.
XIX. MANDATORY FINDINGS OF SIGNIFICANCE

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>a)</em> 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>
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<tr>
<td><em>b)</em> 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>
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<tr>
<td><em>c)</em> Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
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</table>

_a) Less Than Significant with Mitigation_

The proposed project will result in approximately 0.16 acre of permanent impacts to aquatic dispersal habitat and 0.3 acre of upland dispersal habitat for California red-legged frog. With the mitigation measures employed as described in the Biological Resources section of this Initial Study, the impacts to these resources will be reduced to a level of insignificance.

Garnett Creek Bridge is an historic bridge, is listed on the NRHP, and has aesthetic quality. However, the proposed project will avoid impacts to the bridge through project features listed in the Project Description section of this Initial Study, and AMMs listed in the Cultural Resources and Aesthetics section.

_b) No Impact_

All past, present, and future projects went through, or are required to undergo, an environmental review to identify, account for and mitigate for potential significant impacts. All projects have or will incorporate AMMs including standard Caltrans BMPs, which will protect surrounding habitat and water quality. Therefore, Caltrans does not anticipate any cumulative effects as a result of the proposed project.

_c) No Impact_

The project does not have environmental effects which will cause substantial adverse effects on human beings.
Appendix A: References


## Appendix B: List of Preparers

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stefan Galvez-Abadia</td>
<td>Caltrans District 4, Office Chief, Office of Environmental Analysis</td>
</tr>
<tr>
<td>Wahida Rashid</td>
<td>Caltrans District 4, Branch Chief, Office of Environmental Analysis</td>
</tr>
<tr>
<td>Karen Jang</td>
<td>Caltrans District 4, Associate Env. Planner, Office of Environmental Analysis</td>
</tr>
<tr>
<td>Kathryn Rose</td>
<td>Caltrans District 4, Senior Cultural, Office of Cultural Resource Studies</td>
</tr>
<tr>
<td>Noah Stewart</td>
<td>Caltrans District 4, Senior Cultural, Office of Cultural Resource Studies</td>
</tr>
<tr>
<td>Frances Schierenbeck</td>
<td>Caltrans District 4, Associate Env. Planner, Office of Cultural Resource Studies</td>
</tr>
<tr>
<td>Susan Lindsay</td>
<td>Caltrans District 4, Senior Landscape, Office of Landscape Architecture</td>
</tr>
<tr>
<td>Adrienne St. John</td>
<td>Caltrans District 4, Landscape Associate, Office of Landscape Architecture</td>
</tr>
<tr>
<td>Calie Tsui</td>
<td>Caltrans District 4, Landscape Associate, Office of Landscape Architecture</td>
</tr>
<tr>
<td>Robert Blizard</td>
<td>Caltrans District 4, Senior Biologist, Office of Biological Sciences and Permits</td>
</tr>
<tr>
<td>Sophie Kolding</td>
<td>Caltrans District 4, Associate Biologist, Office of Biological Sciences and Permits</td>
</tr>
<tr>
<td>Sergio Ruiz</td>
<td>Caltrans District 4, Senior Trans. Planner, Office of Transit and Community Planning</td>
</tr>
<tr>
<td>Dianne Yee</td>
<td>Caltrans District 4, Associate Trans. Planner, Office of Transit and Community Planning</td>
</tr>
<tr>
<td>Kevin Krewson</td>
<td>Caltrans District 4, Senior Air/Noise, Office of Environmental Engineering (Air/Noise)</td>
</tr>
<tr>
<td>Joel North</td>
<td>Caltrans District 4, Senior Air/Noise, Office of Environmental Engineering (Air/Noise)</td>
</tr>
<tr>
<td>Norman Gonsalves</td>
<td>Caltrans District 4, Senior Water Quality, Office of Environmental Engineering (Water Quality)</td>
</tr>
<tr>
<td>Ganga Tripathi</td>
<td>Caltrans District 4, Water Quality Engineer, Office of Environmental Engineering (Water Quality)</td>
</tr>
<tr>
<td>Chris Wilson</td>
<td>Caltrans District 4, Senior Hazardous Waste, Office of Environmental Engineering (Hazardous Waste)</td>
</tr>
<tr>
<td>Kathleen Reilly</td>
<td>Caltrans District 4, Senior Hydraulics, Office of Hydraulic Engineering</td>
</tr>
<tr>
<td>Chris Risden</td>
<td>Caltrans District 4, Branch Chief, Office of Geotechnical Design – West</td>
</tr>
<tr>
<td>Anna Sojourner</td>
<td>Caltrans District 4, Geologist Engineer, Office of Geotechnical Design – West</td>
</tr>
<tr>
<td>Stewart Lee</td>
<td>Caltrans District 4, Project Engineer, Office of Design – North Counties</td>
</tr>
</tbody>
</table>
Jason Phoen  Caltrans District 4, Project Engineer, Office of Design – North Counties
Santi Lombardo  Caltrans District 4, Project Manager Office of Project Management
Appendix C: Avoidance, Minimization and Mitigation Measures

Caltrans has incorporated several avoidance, minimization and mitigation measures into the proposed project to avoid and minimize the impacts of this project on environmental resources. The proposed avoidance, minimization and mitigation measures are as follows:

<table>
<thead>
<tr>
<th>Protected or Regulated Resource</th>
<th>Proposed Avoidance, Minimization and Mitigation Measures</th>
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<tbody>
<tr>
<td><strong>General Avoidance and Minimization Measures</strong></td>
<td></td>
</tr>
<tr>
<td>1. <strong>Approved Biologist.</strong> The names and qualifications of the proposed biomonitor(s) will be submitted to the USFWS and CDFW for approval at least 30 calendar days prior to the start of construction.</td>
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</tr>
<tr>
<td>a. Prior to working on the site, the approved biomonitor(s) will submit a letter to the USFWS and CDFW verifying that they possess a copy of the Biological Opinion, Streambed Alteration Agreement, and other relevant permits for the project, and understand the Terms and Conditions.</td>
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<tr>
<td>b. The biomonitor(s) will keep a copy of the Biological Opinion, Streambed Alteration Agreement, and other relevant permit materials in their possession when onsite.</td>
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<tr>
<td>c. The biomonitor(s) will be onsite during all work that could reasonably result in take of special status wildlife.</td>
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<tr>
<td>d. The biomonitor(s) will have the authority to stop work that may result in the unauthorized take of special status species through communication with the Caltrans Resident Engineer (RE). If the biomonitor(s) exercises this authority, the USFWS or CDFW will be notified by telephone and email within one working day.</td>
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<tr>
<td>2. <strong>Resident Engineer.</strong> At least 30 calendar days prior to ground disturbance, the RE’s name and telephone number will be provided to the USFWS and CDFW.</td>
<td></td>
</tr>
<tr>
<td>a. The RE will send a letter to the USFWS and CDFW verifying that they possess a copy of the Biological Opinion and Streambed Alteration Agreement and understands the Terms and Conditions.</td>
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<tr>
<td>b. The RE will maintain a copy of the Biological Opinion and other relevant permits onsite whenever construction is taking place.</td>
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<tr>
<td>3. <strong>Worker Environmental Awareness Training.</strong> Prior to ground-disturbing activities, an agency-approved biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of special-status species, migratory birds, and their habitats, how the species might be encountered within the project area, an explanation of the status of these species and protection</td>
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</table>
under the federal and state regulations, the measures to be implemented to conserve listed species and their habitats as they relate to the work site, boundaries within which construction may occur, and how to best avoid the incidental take of listed species. The field meeting will include topics on species identification, life history, descriptions, and habitat requirements during various life stages. Emphasis will be placed on the importance of the habitat and life stage requirements within the context of project maps showing areas where avoidance and minimization measures are to be implemented. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.

4. Biological Monitoring. At least 30 days prior to the onset of activities, the name(s) and credentials of biologists who will conduct preconstruction surveys and relocation activities for the listed species will be submitted to the USFWS and CDFW. No project activities will begin until the proponent has received written approval from the agencies that he/she is approved to conduct the work. An agency-approved biologist will be present onsite during the construction of any erosion control fencing or cofferdams, and prior to and during the dewatering activities to monitor for the frog. Through communication with the RE or his/her designee, the agency-approved biologist may stop work if deemed necessary for any reason to protect listed species and will advise the RE or designee on how to proceed accordingly.

5. USFWS Site Access. If requested, before, during, or upon completion of groundbreaking and any construction activities, Caltrans will allow access by USFWS personnel into the project footprint to inspect the project and its activities. Caltrans requests that all agency representatives contact the RE prior to accessing the work site and review and sign the Safe Work Code of Practices, prior to accessing the work site for the first time.

6. Environmentally Sensitive Area Fencing. Prior to the start of 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 high-visibility orange fencing. The ESA fencing will remain in place throughout the duration of the project and will prevent construction equipment or personnel from entering sensitive habitat areas. The final project plans will depict all locations where ESA fencing will be installed and how it will be installed. 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.
<table>
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<tr>
<th>Protected or Regulated Resource</th>
<th>Proposed Avoidance, Minimization and Mitigation Measures</th>
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<tbody>
<tr>
<td>7. Construction Site Management Practices. The following site restrictions will be implemented to avoid or minimize potential effects on listed species and their habitats:</td>
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<tr>
<td>a. Project-related vehicle traffic will be restricted to established roads and construction areas. Project vehicles will observe a 15-mile-per-hour speed limit while in the project footprint, except on the current highway.</td>
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<tr>
<td>b. Construction access, staging, storage, and parking areas have been designated within the Project footprint and are outside of any designated ESAs. Additional work areas outside of the Project footprint will be 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 prior to initiating construction or grading.</td>
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<tr>
<td>c. Certifying, to the maximum extent practicable, any borrow material to be non-toxic and weed free.</td>
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<tr>
<td>d. All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed at least once daily from the project footprint.</td>
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<tr>
<td>e. Prohibiting all pets from entering the project area during construction.</td>
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<tr>
<td>f. Prohibiting 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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<tr>
<td>g. Maintaining all equipment in order to prevent the leakage of vehicle fluids such as gasoline, oils or solvents, and developing a Spill Response Plan. Hazardous materials such as fuels, oils, solvents, etc. will be stored in sealable containers in a designated location that is at least 50 feet from wetlands and aquatic habitats.</td>
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<tr>
<td>h. Servicing vehicles and construction equipment including fueling, cleaning, and maintenance at least 50 feet from any aquatic habitat unless separated by topographic or drainage barrier.</td>
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<tr>
<td>8. Early dissemination of information to the public will be important to forewarn potentially affected neighbors about the temporary inconveniences related to construction activities</td>
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<td>9. Solid waste will be reduced, recycled, and reused to the maximum extent feasible</td>
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<tr>
<td>10. Recycle construction debris to maximum extent feasible</td>
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<tr>
<td>11. Ensure efficient water use for adequate dust control during construction</td>
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<tr>
<td>Caltrans proposes to compensate for temporary impacts to riparian habitat at a 3:1 replacement planting ratio.</td>
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<tr>
<td>Protected or Regulated Resource</td>
<td>Proposed Avoidance, Minimization and Mitigation Measures</td>
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</tr>
<tr>
<td>Mitigation: Replacement Planting</td>
<td>Tree replacement planting ratios are as follows:</td>
</tr>
<tr>
<td></td>
<td>Valley Oak tree (upland vegetation habitat) - 3:1</td>
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<tr>
<td></td>
<td>California buckeye tree (riparian habitat) – 3:1</td>
</tr>
<tr>
<td></td>
<td>Bigleaf maple tree (riparian habitat) – 3:1</td>
</tr>
<tr>
<td></td>
<td>California bay laurel trees (riparian habitat) – 3:1</td>
</tr>
<tr>
<td></td>
<td>Eucalyptus trees (non-native) – 1:1</td>
</tr>
</tbody>
</table>

**Water Quality**

1. Caltrans will apply the requirements from the existing National Pollutant Discharge Elimination System permit and the Construction General Permit, along with standard BMPs for construction site management, to address hazardous waste from construction activities.
2. The project will implement Temporary Construction Site BMPs to reduce pollutants in storm water and non-storm water discharges throughout construction.
3. The project will implement Permanent Design Pollution Prevention BMPs.
4. The project will develop and implement Permanent Erosion Control BMPs.
5. The project will implement Permanent Treatment BMPs.

**California red-legged frog**

1. **CRLF: Prevention of Entrapment.** If at any time a trapped listed animal is discovered, the biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape, or the USFWS will be contacted by telephone for guidance. The USFWS will be notified of the incident by telephone and electronic mail within one working day.

2. **CRLF: Protocol for Species Relocation and Reporting.** If frogs are encountered in the immediate work area the following procedures will be followed:
   a. If a frog is discovered during surveys or project activities, the RE and USFWS-approved biologist will be immediately informed. If a frog gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the construction zone or is removed by the USFWS-approved biologist. The captured frog will be released within appropriate habitat outside of the construction area within the creek riparian corridor. The release habitat will be determined by the USFWS-approved biologist.
   b. The USFWS-approved biologist will have the authority to halt work through coordination with the RE in the event that a frog is discovered within the project footprint. The RE will ensure construction activities remain suspended in any construction area where the qualified biologist has determined that a potential take of the frog could occur. Work will resume once the animal leaves the site voluntarily, is removed by the biologist(s) to a release site using USFWS-approved handling techniques, or it is determined that the frog is not being harassed by construction activities. If take occurs, the biologist(s)
<table>
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<th>Protected or Regulated Resource</th>
<th>Proposed Avoidance, Minimization and Mitigation Measures</th>
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<tr>
<td></td>
<td>will notify the USFWS contact by telephone and electronic mail within one working day.</td>
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<tr>
<td>c.</td>
<td>The biological monitor(s) will take precautions to prevent introduction of amphibian diseases in accordance with the Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005).</td>
</tr>
<tr>
<td>d.</td>
<td>Injured frogs will be cared for by a USFWS-approved biologist or a licensed veterinarian, if necessary. Dead frogs will be preserved according to standard museum techniques and held in a secure location. The USFWS will be notified within one working day of the discovery of a death or an injury of frog(s) resulting from project-related activities or if a frog is observed at the project site. Notification will include the date, time, and location of the incident or of the finding of a dead or injured animal clearly indicated on a USGS 7.5-minute quadrangle and other maps at a finer scale, as requested by the USFWS, and any other pertinent information.</td>
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<tr>
<td>e.</td>
<td>Caltrans will submit post-construction compliance reports prepared by the biologist to the USFWS within 60 calendar days following completion of project activities or within 60 calendar days of any break in construction activity lasting more than 60 calendar days. This report will detail (1) dates that relevant project activities occurred; (2) pertinent information concerning the success of the project in implementing AMMs for listed species; (3) an explanation of failure to meet such measures, if any; (4) known project effects on the frog, if any; (5) occurrences of incidental take of listed species; (6) documentation of employee environmental education; and (7) other pertinent information.</td>
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3. **CRLF: Pre-Construction Surveys.** Pre-construction surveys for the frog will be conducted by the USFWS-approved biologist no more than 20 calendar days prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal) beyond the existing pavement. These efforts will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The USFWS-approved biologist will investigate potential cover sites when it is feasible and safe to do so. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the project limits will be documented and relocated to an adequate cover site in the vicinity. Safety permitting, the USFWS-approved biologist(s) will investigate areas of disturbed soil for signs of frogs within 30 minutes following initial disturbance of the given area.

4. **CRLF: Covered Excavation Areas.** To prevent the inadvertent entrapment of the CRLF, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials. If it is not feasible to cover an excavation, one or more escape ramps constructed of earthen fill or wooden
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<th>Protected or Regulated Resource</th>
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<tr>
<td></td>
<td>planks shall be installed. Before such holes or trenches are</td>
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<td></td>
<td>filled, they must be thoroughly inspected for trapped animals.</td>
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<tr>
<td>5. <strong>Wildlife Exclusion Fencing.</strong> Prior to the start of construction, the project footprint will be delineated, where necessary, with temporary, high-visibility wildlife exclusion fencing to prevent the inadvertent encroachment of the frog and other wildlife into the project footprint. The fencing will be maintained throughout the duration of the project and removed only when all construction equipment is removed from the job site.</td>
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<tr>
<td><strong>Burke's Goldfield</strong></td>
<td>1. <strong>Burke's Goldfield: Pre-ConSTRUCTION Surveys.</strong> Although liste</td>
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<td>d plants were not observed during protocol surveys, pre-</td>
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<td>construction surveys will be implemented within the suitable habitat mapped in the action area and depicted in the rare plant report map set. Timing of pre-construction surveys will be determined per the pending Biological Opinion. If an endangered plant is found, ESA fencing will be placed, to the extent practicable, around the area to ensure the areas will be avoided. If that is not possible, plants will be salvaged and regulatory agency staff contacted.</td>
</tr>
<tr>
<td><strong>Northern Spotted Owl</strong></td>
<td>1. <strong>Northern Spotted Owl: Vegetation Removal.</strong> Should vegetation removal occur during the owl’s breeding season (Feb 1 through Sep 30), a USFWS-approved biologist will conduct protocol surveys following the USFWS owl survey protocols (USFWS 2012) or most current protocol. Timing of protocol surveys will be determined per the pending Biological Opinion.</td>
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<tr>
<td></td>
<td>2. To the greatest extent feasible, all major tree removal will be conducted between October 1 and January 31, prior to the onset of winter rains, outside the Northern spotted owl's nesting season and during the later portion of the owl's breeding season (February 1 to September 30) and one year prior to the start of construction activities. Trees will be stumped and roots left in place until construction commences the following year.</td>
</tr>
<tr>
<td><strong>California Freshwater Shrimp</strong></td>
<td>1. <strong>CA Freshwater Shrimp:</strong> As required under FESA, Caltrans will implement reasonable and prudent measures to minimize and avoid the potential take of the shrimp. Caltrans will incorporate the project features and AMMs for the shrimp.</td>
</tr>
<tr>
<td>Protected or Regulated Resource</td>
<td>Proposed Avoidance, Minimization and Mitigation Measures</td>
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</table>
| **Migratory birds**              | 1. **Migratory Birds and Nest Avoidance.** During the bird nesting season (February 1 through September 30), pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. To minimize and avoid take of migratory birds, their nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season, prior to construction. This work will be limited to vegetation and trees that are within the project footprint.  
2. With the exception of nests of listed bird species and eagles, inactive nests will be removed to deter birds from re-establishing nests within the project area. Caltrans will remove unoccupied bird nests during the non-nesting season (October 1 to January 31) prior to or during construction.  
3. |
<p>| <strong>Pallid Bat and Townsend's Big-Eared Bat</strong> | 1. If clearing and grubbing occurs between May 1 and September 1, an agency approved bat biologist(s) will conduct visual and acoustic bat surveys for roosting bats, or evidence of roosting bats prior to construction. The bat biologist(s) will visually inspect tree foliage, bark, and cavities, and any other structures that could provide roosting habitat for bats. Work will stop if a maternity roost is discovered, and Biologist(s) will establish a 100-foot buffer around the roost. |</p>
<table>
<thead>
<tr>
<th>Cultural Resources</th>
<th>Proposed Avoidance, Minimization and Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caltrans Resident Engineer will inform the Caltrans PQS Architectural Historian of any proposed project changes pre-construction.</td>
<td></td>
</tr>
<tr>
<td>2. Caltrans Resident Engineer will notify Caltrans PQS Architectural Historian at least three weeks in advance of construction.</td>
<td></td>
</tr>
<tr>
<td>3. Caltrans PQS Architectural Historian, Caltrans Resident Engineer, Caltrans Project Manager and, Contractor will have a field meeting prior to the beginning of construction to discuss the character defining features of the Garnett Creek Bridge and the importance of the SOIS.</td>
<td></td>
</tr>
<tr>
<td>4. Caltrans Resident Engineer will inform the Caltrans PQS Architectural Historian of any proposed project changes during construction.</td>
<td></td>
</tr>
<tr>
<td>5. The Caltrans Resident Engineer will inform the Caltrans PQS Architectural Historian when construction is complete.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aesthetics</th>
<th>Proposed Avoidance, Minimization and Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Minimize removal of large mature trees and shrubs to the greatest extent possible</td>
<td></td>
</tr>
<tr>
<td>2. Limit tree trimming by the Contractor to those required to provide a clear work area</td>
<td></td>
</tr>
<tr>
<td>3. Trees to be removed should be indicated on the plans during the Design phase after consultation with the Caltrans Landscape Associate</td>
<td></td>
</tr>
<tr>
<td>4. Implement design exceptions where feasible to avoid removal of significant existing trees and vegetation</td>
<td></td>
</tr>
<tr>
<td>Protected or Regulated Resource</td>
<td>Proposed Avoidance, Minimization and Mitigation Measures</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Air Quality/Greenhouse Gas**  | 1. Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.  
2. Use energy and fuel-efficient vehicles and equipment  
3. Use alternative (non-petroleum based) fuels  
4. Use the minimum feasible amount of GHG-emitting construction materials that is feasible  
5. Solid waste will be reduced, recycled, and reused to the maximum extent feasible  
6. Improve fuel efficiency from construction equipment by minimizing idling time and maintaining construction equipment in proper working condition |

| **Noise**                       | 1. Combine noisy operations to occur within the same time period. The total noise level will not be significantly greater than the level produced if operations are performed separately.  
2. Avoid unnecessary nighttime idling of internal combustion engines within 100 feet of sensitive receptors.  
3. Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.  
4. Utilize “quiet” air compressors and other “quiet” equipment where such technology exists.  
5. Properly maintain all internal combustion engines to minimize noise generation. |
Appendix D: Biology Figures
Figure 8: Garnett Creek Branch BSA
Figure 9: Garnett Creek BSA
Figure 10: No Name Creek BSA

No Name Creek Bridge Project
Footprint and BSA
Bridge Preventative Maintenance and Scour Mitigation Project
Napa County, California
State Route 29, Postmiles 38.96/42.83
EA 04-2-88U/PID 0419000401

Legend
phasis Project footprint
phasis BSA
Figure 11: Special Status Wildlife Occurrences
Figure 12: NMFS Species List

National Marine Fisheries Service
Species List
August 15, 2018

Quad Name Calistoga
Quad Number 38122-E5

ESA Anadromous Fish
SONCC Coho ESU (T) -
CCC Coho ESU (E) - X
CC Chinook Salmon ESU (T) - X
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SC Steelhead DPS (T) -
CCV Steelhead DPS (E) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat
SONCC Coho Critical Habitat - X
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - X
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates
Range Black Abalone (E) -
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

**ESA Whales**

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

**ESA Pinnipeds**

Guadalupe Fur Seal (T) -

**Essential Fish Habitat**

Coho EFH - \( \times \)
Chinook Salmon EFH - \( \times \)
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**
See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -
National Marine Fisheries Service
Species List

August 15, 2018

Quad Name Detert Reservoir
Quad Number 38122-E5

**ESA Anadromous Fish**

SONCC Coho ESU (T) - 
CCC Coho ESU (E) - X
CC Chinook Salmon ESU (T) - X
CVSR Chinook Salmon ESU (T) - 
SRWR Chinook Salmon ESU (E) - 
NC Steelhead DPS (T) - 
CCC Steelhead DPS (T) - 
SCCC Steelhead DPS (T) - X
SC Steelhead DPS (E) - 
CCV Steelhead DPS (T) - 
Eulachon (T) - 
sDPS Green Sturgeon (T) -

**ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - 
CCC Coho Critical Habitat - X
CC Chinook Salmon Critical Habitat - 
CVSR Chinook Salmon Critical Habitat - 
SRWR Chinook Salmon Critical Habitat - 
NC Steelhead Critical Habitat - 
CCC Steelhead Critical Habitat - X
SCCC Steelhead Critical Habitat - 
SC Steelhead Critical Habitat - 
CCV Steelhead Critical Habitat - 
Eulachon Critical Habitat - 
sDPS Green Sturgeon Critical Habitat -

**ESA Marine Invertebrates**

Range Black Abalone (E) - 
Range White Abalone (E) -
**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

**ESA Whales**

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

**ESA Pinnipeds**

Guadalupe Fur Seal (T) -

**Essential Fish Habitat**

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -
Figure 13: USFWS Species List

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2000 Cottage Way Room W3065
Sacramento, CA 95825-1946
Phone: (916) 414-6610 Fax: (916) 414-6713

In Reply Refer To: August 15, 2019
Consultation Code: 08ESFM00-2018-SLI-0613
Event Code: 08ESFM00-2018-E-08840
Project Name: Garnett Creek and Garnett Creek Branch Bridge Scour Repair Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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

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

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IFaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IFaC system by completing the same process used to receive the enclosed list.
The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

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

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

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

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/contow.html.

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

• Official Species List
Official Species List

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

This species list is provided by:

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

Consultation Code: 08ESMF00-2018-SLI-0613

Event Code: 08ESMF00-2018-E-08840

Project Name: Garnett Creek and Garnett Creek Branch Bridge Scour Repair Project

Project Type: TRANSPORTATION

Project Description: NAP-29-38.96/39.1

Project Location:
Approximate location of the project can be viewed in Google Maps: [https://www.google.com/maps/place/38.60279010593745N122.58744503347293W](https://www.google.com/maps/place/38.60279010593745N122.58744503347293W)

Counties: Napa, CA
Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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

Birds

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Spotted Owl Strix occidentalis caurina</td>
<td>Threatened</td>
</tr>
<tr>
<td>There is final critical habitat for this species. Your location is outside the critical habitat.</td>
<td></td>
</tr>
<tr>
<td>Species profile: <a href="https://ecos.fws.gov/ecoregions/1123">https://ecos.fws.gov/ecoregions/1123</a></td>
<td></td>
</tr>
</tbody>
</table>

Reptiles

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Sea Turtle Chelonia mydas</td>
<td>Threatened</td>
</tr>
<tr>
<td>Population: East Pacific DPS</td>
<td></td>
</tr>
<tr>
<td>No critical habitat has been designated for this species.</td>
<td></td>
</tr>
<tr>
<td>Species profile: <a href="https://ecos.fws.gov/ecoregions/6199">https://ecos.fws.gov/ecoregions/6199</a></td>
<td></td>
</tr>
</tbody>
</table>

Amphibians

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Red-legged Frog Rana draytonii</td>
<td>Threatened</td>
</tr>
<tr>
<td>There is final critical habitat for this species. Your location is outside the critical habitat.</td>
<td></td>
</tr>
<tr>
<td>Species profile: <a href="https://ecos.fws.gov/ecoregions/2891">https://ecos.fws.gov/ecoregions/2891</a></td>
<td></td>
</tr>
</tbody>
</table>
### Fishes

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta Smelt <em>Hypomesus transpacificus</em></td>
<td>Threatened</td>
</tr>
</tbody>
</table>

- There is final critical habitat for this species. Your location is outside the critical habitat.
- Species profile: [https://ecos.fws.gov/ceep/species/321](https://ecos.fws.gov/ceep/species/321)

### Crustaceans

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Freshwater Shrimp <em>Syncaris pacifica</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

- No critical habitat has been designated for this species.
- Species profile: [https://ecos.fws.gov/ceep/species/7303](https://ecos.fws.gov/ceep/species/7303)

### Flowering Plants

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burke's Goldfields <em>Lasthenia burkei</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

- No critical habitat has been designated for this species.
- Species profile: [https://ecos.fws.gov/ceep/species/4338](https://ecos.fws.gov/ceep/species/4338)

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calistoga Allocarya <em>Plagiobothrys strictus</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

- No critical habitat has been designated for this species.
- Species profile: [https://ecos.fws.gov/ceep/species/6161](https://ecos.fws.gov/ceep/species/6161)

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clara Hunt's Milk-vetch <em>Astrogalus clarianus</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

- No critical habitat has been designated for this species.
- Species profile: [https://ecos.fws.gov/ceep/species/3300](https://ecos.fws.gov/ceep/species/3300)

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loch Lomond Coyote Thistle <em>Eryngium constanceei</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

- No critical habitat has been designated for this species.
- Species profile: [https://ecos.fws.gov/ceep/species/5106](https://ecos.fws.gov/ceep/species/5106)

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Napa Bluegrass <em>Poa napensis</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

- No critical habitat has been designated for this species.
- Species profile: [https://ecos.fws.gov/ceep/species/2266](https://ecos.fws.gov/ceep/species/2266)

### Critical habitats

**THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.**
In Reply Refer To: Consultation Code: 02ESMF00-2018-SLI-0614
Event Code: 02ESMF00-2018-E-00841
Project Name: No Name Creek Bridge Scarf Repair Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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

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

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IFaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IFaC system by completing the same process used to receive the enclosed list.
The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

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Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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

- Official Species List
Official Species List

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

This species list is provided by:

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

Consultation Code: 08ESMF00-2018-SLI-0614

Event Code: 08ESMF00-2018-E-08841

Project Name: No Name Creek Bridge Scour Repair Project

Project Type: TRANSPORTATION

Project Description: NAP-29-42.83

Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.6415038027288N122.59647961055174W

Counties: Napa, CA
**Endangered Species Act Species**

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

IPAÇ does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries\(^1\), as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

### Birds

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Spotted Owl <em>Strix occidentalis caurina</em></td>
<td>Threatened</td>
</tr>
</tbody>
</table>

There is final critical habitat for this species. Your location is outside the critical habitat.
Species profile: [https://ecos.fws.gov/ecoregions/1123](https://ecos.fws.gov/ecoregions/1123)

### Reptiles

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Sea Turtle <em>Chelonia mydas</em></td>
<td>Threatened</td>
</tr>
</tbody>
</table>

Population: East Pacific DPS
No critical habitat has been designated for this species.
Species profile: [https://ecos.fws.gov/ecoregions/6159](https://ecos.fws.gov/ecoregions/6159)

### Amphibians

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Red-legged Frog <em>Rana draytonii</em></td>
<td>Threatened</td>
</tr>
</tbody>
</table>

There is final critical habitat for this species. Your location is outside the critical habitat.
Species profile: [https://ecos.fws.gov/ecoregions/2891](https://ecos.fws.gov/ecoregions/2891)
### Fishes

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta Smelt <em>Hypomesus transpacificus</em></td>
<td>Threatened</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

### Crustaceans

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Freshwater Shrimp <em>Syncaris pacifica</em></td>
<td>Endangered</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

### Flowering Plants

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burke's Goldfields <em>Lasthenia burkei</em></td>
<td>Endangered</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Critical habitats

**THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.**
Figure 14: CNPS Species List

Plant List

Inventory of Rare and Endangered Plants

61 matches found. Click on scientific name for details

Scientific Name  Common Name  Family  Lifeform  Blooming Period  CA Rare Plant Rank  State Rank  Global Rank

Ammophila californica var. papillosa  Napa salt-marsh  Fabaceae  perennial herb  Apr-Jul  1B.2  92  04T2

Arctostaphylos uncinata  twine-like snapdragon  Plantaginaceae  perennial herb Jun-Jul  4.3  9394  03T4

Arctostaphylos manzanita ssp. elegans  Konkow manzanita  Ericaceae  perennial evergreen shrub  Jan-Mar-May  1B.3  53  05T3

Arctostaphylos stantfordiana ssp. discolorata  Rincon Ridge manzanita  Ericaceae  perennial evergreen shrub  Feb-Apr  1B.1  51  03T1

Asclepias californica  serpentine milkweed  Apocynaceae  perennial herb  May-Jul  4.2  53  03

Astragalus brevifolius  Brewer's milk-vetch  Fabaceae  annual herb  Apr-Jun  4.2  53  03

Astragalus californicus  Clare Hunt's milk-vetch  Fabaceae  annual herb  Mar-May  51  01

Astragalus clevelandii  Cleveland's milk-vetch  Fabaceae  perennial herb  Jun-Sep  4.3  54  04

Astragalus platyphyllus var. tembloritanus  Jepson's milk-vetch  Fabaceae  annual herb  Mar-Jun  1B.2  53  04T3

Brodiaea leptantha  narrow-leafed brodiaea  Thymelaeaceae  perennial bulbiferous herb  May-Jul  1B.2  53  03T2

Calystegia quinquapetala  four-petaled pueraria  Montanaceae  annual herb  Apr-Jun  4.3  54  04

Calystegia soldanella  Mt. Saint Helena morning-glory  Convolvulaceae  perennial rhizomatous herb  Apr-Jun  4.2  53  04T3

Calystegia soldanella ssp. yunheli  South Coast Range morning-glory  Convolvulaceae  perennial rhizomatous herb  Apr-Jun  4.3  54  04T4

Ceanothus cordulatus  Rincon Ridge ceanothus  Rhamnaceae  perennial evergreen shrub  Feb-Jun  1B.1  51  01

Ceanothus divergens  Calystegia ceanothus  Rhamnaceae  perennial evergreen shrub  Feb-Apr  1B.2  52  02

Ceanothus parviceps  hillside ceanothus  Rhamnaceae  perennial evergreen shrub  Feb-Jun  1B.2  52  02

Ceanothus greggii  Sonoma ceanothus  Rhamnaceae  perennial evergreen shrub  Feb-Apr  1B.2  52  02

Ceanothus purpusii ssp. parviceps  Sonoma ceanothus  Rhamnaceae  annual herb  May-Jun  1B.2  52  03T2

Ceanothus greggii ssp. parviceps  Sonoma ceanothus  Rhamnaceae  annual herb  May-Jun  1B.2  52  03T2

Ceanothus greggii ssp. parviceps  Sonoma ceanothus  Rhamnaceae  annual herb  May-Jun  1B.2  52  03T2

Ceanothus greggii ssp. parviceps  Sonoma ceanothus  Rhamnaceae  annual herb  May-Jun  1B.2  52  03T2

Cladonia brevipes  Brewer's claddia  Cladoniaceae  annual herb  Apr-Jun  4.2  54  04
<table>
<thead>
<tr>
<th><strong>Genus</strong></th>
<th><strong>Common Name</strong></th>
<th><strong>Family</strong></th>
<th><strong>Life Form</strong></th>
<th><strong>Flowering Period</strong></th>
<th><strong>Habitat Rating</strong></th>
<th><strong>Vegetation Rating</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collomia diversifolia</strong></td>
<td>serpentine collomia</td>
<td>Polemoniaceae</td>
<td>annual herb</td>
<td>May-Jun</td>
<td>4.3</td>
<td>S4</td>
</tr>
<tr>
<td><strong>Cordylanthus tenuis ssp. brunnus</strong></td>
<td>serpentine bird's-beak</td>
<td>Crocanthaceae</td>
<td>annual herb (hemiparastic)</td>
<td>Jul-Aug</td>
<td>4.3</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Cryptantha dissita</strong></td>
<td>serpentine cryptantha</td>
<td>Boraginaceae</td>
<td>annual herb</td>
<td>Apr-Jun</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Delphinium uliginosum</strong></td>
<td>swamp larkspur</td>
<td>Ranunculaceae</td>
<td>perennial herb</td>
<td>May-Jun</td>
<td>4.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Erigeron biolitii</strong></td>
<td>streamside daisy</td>
<td>Asteraceae</td>
<td>perennial herb</td>
<td>Jun-Oct</td>
<td>3</td>
<td>S3?</td>
</tr>
<tr>
<td><strong>Erigeron greenei</strong></td>
<td>Greene's narrow-leaved daisy</td>
<td>Asteraceae</td>
<td>perennial herb</td>
<td>May-Sep</td>
<td>1B.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Eriogonum umbellatum var. bahiforme</strong></td>
<td>bay buckwheat</td>
<td>Polygonaceae</td>
<td>perennial herb</td>
<td>Jul-Sep</td>
<td>4.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Eryngium constancei</strong></td>
<td>Loch Lomond buttoncelery</td>
<td>Apiaceae</td>
<td>annual / perennial herb</td>
<td>Apr-Jun</td>
<td>1B.1</td>
<td>S1</td>
</tr>
<tr>
<td><strong>Erythronium heleneae</strong></td>
<td>St. Helena fawn lily</td>
<td>Liliaceae</td>
<td>perennial bulbiferous</td>
<td>Mar-May</td>
<td>4.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Harmania hallii</strong></td>
<td>Hall's harmonia</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Apr-Jun</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Harmania nutans</strong></td>
<td>nodding harmonia</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Mar-May</td>
<td>4.3</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Hesperolinon biccarpellatum</strong></td>
<td>two-carpellate western flax</td>
<td>Linaceae</td>
<td>annual herb</td>
<td>May-Jul</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Hesperolinon sharpsmithiae</strong></td>
<td>Sharsmith's western flax</td>
<td>Linaceae</td>
<td>annual herb</td>
<td>May-Jul</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Juncus luciensis</strong></td>
<td>Santa Lucia dwarf rush</td>
<td>Juncaceae</td>
<td>annual herb</td>
<td>Apr-Jul</td>
<td>1B.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Lasthenia burkei</strong></td>
<td>Burke's goldfields</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Apr-Jun</td>
<td>1B.1</td>
<td>S1</td>
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<tr>
<td><strong>Lasthenia conjugens</strong></td>
<td>Contra Costa goldfields</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Mar-Jun</td>
<td>1B.1</td>
<td>S1</td>
</tr>
<tr>
<td><strong>Layia septentrionalis</strong></td>
<td>Colusa layia</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Apr-May</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Leptosiphon jepsonii</strong></td>
<td>Jepson's leptosiphon</td>
<td>Polemoniaceae</td>
<td>annual herb</td>
<td>Mar-May</td>
<td>1B.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Lessingia hololeuca</strong></td>
<td>woolly-headed lessingia</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Jun-Oct</td>
<td>3</td>
<td>S3?</td>
</tr>
<tr>
<td><strong>Limnanthes floccosa ssp. floccosa</strong></td>
<td>woolly meadowfoam</td>
<td>Limnanthaceae</td>
<td>annual herb</td>
<td>Mar-May (Jun)</td>
<td>4.2</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Limnanthes vinculans</strong></td>
<td>Sebastopol meadowfoam</td>
<td>Limnanthaceae</td>
<td>annual herb</td>
<td>Apr-May</td>
<td>1B.1</td>
<td>S1</td>
</tr>
<tr>
<td><strong>Lomatium repandum</strong></td>
<td>Napa lomatium</td>
<td>Apiaceae</td>
<td>perennial herb</td>
<td>Mar-Jun</td>
<td>4.3</td>
<td>S3</td>
</tr>
<tr>
<td><strong>Lupinus sericatus</strong></td>
<td>Cobb Mountain lupine</td>
<td>Fabaceae</td>
<td>perennial herb</td>
<td>Mar-Jun</td>
<td>1B.2</td>
<td>S2?</td>
</tr>
<tr>
<td><strong>Micopus amphibolus</strong></td>
<td>Mt. Diablo cottonweed</td>
<td>Asteraceae</td>
<td>annual herb</td>
<td>Mar-May</td>
<td>3.2</td>
<td>S3S4</td>
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<tr>
<td><strong>Monardella viridis</strong></td>
<td>green monardella</td>
<td>Lamiaceae</td>
<td>perennial rhizomatous</td>
<td>Jun-Sep</td>
<td>4.3</td>
<td>S4</td>
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<tr>
<td><strong>Navarritia leucocaphala ssp. bakeri</strong></td>
<td>Baker's navarretia</td>
<td>Polemoniaceae</td>
<td>annual herb</td>
<td>Apr-Jul</td>
<td>1B.1</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Navarritia myrsii ssp. deminuta</strong></td>
<td>small pin cushion navarretia</td>
<td>Polemoniaceae</td>
<td>annual herb</td>
<td>Apr-May</td>
<td>1B.1</td>
<td>S1</td>
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<tr>
<td><strong>Navarritia paradoxota</strong></td>
<td>Porter's navarretia</td>
<td>Polemoniaceae</td>
<td>annual herb</td>
<td>May-Jun (Jul)</td>
<td>1B.3</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Penstemon newberryi var. sonomensis</strong></td>
<td>Sonoma beardtongue</td>
<td>Plantaginaceae</td>
<td>perennial herb</td>
<td>Apr-Aug</td>
<td>1B.3</td>
<td>S2</td>
</tr>
<tr>
<td><strong>Plagiobothrys strictus</strong></td>
<td>Calistoga popcornflower</td>
<td>Boraginaceae</td>
<td>annual herb</td>
<td>Mar-Jun</td>
<td>1B.1</td>
<td>S1</td>
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<tr>
<td>Common Name</td>
<td>Scientific Name</td>
<td>Family</td>
<td>Life Form</td>
<td>Bloom Time</td>
<td>Rating</td>
<td>Conservation Status</td>
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<td>--------------</td>
<td>-----------------</td>
<td>------------</td>
<td>--------</td>
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</tr>
<tr>
<td>Poa napensis</td>
<td>Napa blue grass</td>
<td>Poaceae</td>
<td>perennial herb</td>
<td>May-Aug</td>
<td>1B.1</td>
<td>S1</td>
</tr>
<tr>
<td>Puccinellia simplex</td>
<td>California alkali grass</td>
<td>Poaceae</td>
<td>annual herb</td>
<td>Mar-May</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td>Ranunculus lobbii</td>
<td>Lobb's aquatic buttercup</td>
<td>Ranunculaceae</td>
<td>annual herb (aquatic)</td>
<td>Feb-May</td>
<td>4.2</td>
<td>S3</td>
</tr>
<tr>
<td>Sidalcea hickmani ssp. napensis</td>
<td>Napa checkerbloom</td>
<td>Malvaceae</td>
<td>perennial herb</td>
<td>Apr-Jun</td>
<td>1B.1</td>
<td>S1</td>
</tr>
<tr>
<td>Sidalcea oregana ssp. hydrophila</td>
<td>marsh checkerbloom</td>
<td>Malvaceae</td>
<td>perennial herb</td>
<td>(Jun)July-Aug</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td>Streptanthus brachyopus</td>
<td>Tamalpais jewelflower</td>
<td>Brassicaceae</td>
<td>annual herb</td>
<td>Apr-Jul</td>
<td>1B.3</td>
<td>S2</td>
</tr>
<tr>
<td>Streptanthus brachiatius ssp. brachiatius</td>
<td>Socrates Mine jewelflower</td>
<td>Brassicaceae</td>
<td>perennial herb</td>
<td>May-Jun</td>
<td>1B.2</td>
<td>S1</td>
</tr>
<tr>
<td>Streptanthus hoseridis</td>
<td>green jewelflower</td>
<td>Brassicaceae</td>
<td>annual herb</td>
<td>May-Jul</td>
<td>1B.2</td>
<td>S2</td>
</tr>
<tr>
<td>Streptanthus morrisonii ssp. elatus</td>
<td>Three Peaks jewelflower</td>
<td>Brassicaceae</td>
<td>perennial herb</td>
<td>Jun-Sep</td>
<td>1B.2</td>
<td>S1</td>
</tr>
<tr>
<td>Streptanthus vernalis</td>
<td>early jewelflower</td>
<td>Brassicaceae</td>
<td>annual herb</td>
<td>Mar-May</td>
<td>1B.2</td>
<td>S1</td>
</tr>
<tr>
<td>Trichostema ruvugsi</td>
<td>Napa bluecurls</td>
<td>Lamiaceae</td>
<td>annual herb</td>
<td>Jun-Oct</td>
<td>1B.2</td>
<td>S1S2</td>
</tr>
<tr>
<td>Trifolium hydrophilum</td>
<td>saline clover</td>
<td>Fabaceae</td>
<td>annual herb</td>
<td>Apr-Jun</td>
<td>1B.2</td>
<td>S2</td>
</tr>
</tbody>
</table>

**Suggested Citation**

Figure 15: Tree Removal at Garnett Creek Branch

Trees within the Garnett Creek Branch Bridge Project Footprint and BSA

Bridge Preventative Maintenance and Scour Mitigation Project
Napa County, California
State Route 29, Postmiles 38.96/42.83
EA 04-2JBBUPID 0418000401

Legend
- Existing trees
- Trees to be removed
- Project footprint
- BSA
Figure 16: Tree Removal at Garnett Creek
Figure 17: Tree Removal at No Name Creek
Appendix E: Preliminary Plans and Cross Sections
Assumptions:
1. Traffic will pass through construction site.
2. Placement of construction equipment and materials may require temporary lane closures.

LEGENDS:
- Indicates existing structure
- Indicates wall profile and hidden line
- Indicates new structure

NOTES:
1. Plan view is prior to survey date. After further field review, design approach may change.
2. Excavation, shaping, and grading should be done prior to work to start.
3. Use concrete base when used for grout under footings.
4. Reinforcement not shown.

PROCEDURES:
1. Remove or excavate rock material at and under equipment footing without disturbing soil wall.
2. Place top grout or footing above and under footing. Pour in grout until footing is 1/2 to 3/4 of height.
3. Embed or install rebar or other reinforcement in structure to provide load-bearing capacity.
4. Repair or replace existing footing or structure as necessary.
5. Backfill or install new footing as required to provide support and stability.

SECTION A-A

SECTION B-B

SECTION C-C

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

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Appendix F: Title VI Non-Discrimination Policy

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

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

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"