

Feather River Drainage Project

BUTTE COUNTY and PLUMAS COUNTY, CALIFORNIA

02-BUT/PLU-70-PM 35.9/47.9, 13.1

EA#: 02-0H030

EFIS#: 0214000086

Initial Study with Proposed Mitigated Negative Declaration



Prepared by the
State of California, Department of Transportation
Caltrans District 2
1657 Riverside Drive, MS-30
Redding, CA 96001

January 2016

General Information about this Document

What's in this document?

This Initial Study with proposed Mitigated Negative Declaration (IS/MND) examines the potential environmental effects of a proposed culvert project on State Route 70, in Butte County and Plumas County. The purpose of the proposed project is to repair and replace culverts in accordance with current requirements, as well as construct new drainage facilities where appropriate. Work would consist of the repair, replacement, upgrading, and/or installation of culverts and inlet/outlet treatments. This Initial Study was prepared to comply with the California Environmental Quality Act (CEQA). This document describes the purpose and need for the project, project alternatives, existing conditions, and potential effects from the proposed project.

What should you do?

- Please read this Initial Study
- You are invited to review the environmental document and technical studies. A printed copy of the document and technical studies can be found during business hours (Monday-Friday, 8:00 a.m. to 4:30 p.m.) at the Caltrans District Office located at 1657 Riverside Drive in Redding, or a printed copy of the document at the Oroville Post Office (Monday-Friday, 8:30 a.m. to 5:00 p.m. and Saturday 9:00 a.m. to 1:00 p.m.), located at 1735 Robinson Street in Oroville. A copy of the environmental document is also available on Caltrans' website at www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm.
- We welcome your comments. If you have any information or concerns regarding the project, please send your written comments to Caltrans by the deadline. Submit comments via regular mail to:

California Department of Transportation
Attention: Christopher Quiney
North Region Office of Environmental Mgmt., MS-30
1657 Riverside Drive
Redding, CA 96001

- You may also submit comments via e-mail to Chris.Quiney@dot.ca.gov
- Submit comments by the deadline: March 1, 2016.

What happens after this?

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Chris Quiney, North Region Environmental Management, 1657 Riverside Drive, Redding, CA 96001; (530) 225-3174 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

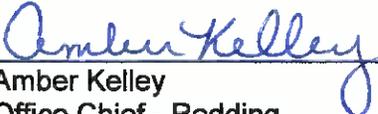
Feather River Drainage Project

In Butte County and Plumas County, California on State Route 70
At Post Mile 35.9/47.9, 13.1

**INITIAL STUDY WITH
PROPOSED MITIGATED NEGATIVE DECLARATION**

Submitted Pursuant to: Division 13, California Public Resources Code

STATE OF CALIFORNIA
Department of Transportation


Amber Kelley
Office Chief - Redding
North Region Environmental Services
California Department of Transportation

1-25-16
Date

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to conduct culvert work along State Route (SR) 70 in Butte and Plumas Counties. The purpose of the proposed project is to repair and replace culverts in accordance with current requirements, as well as construct new drainage facilities where appropriate. Work would consist of the repair, replacement, upgrading, and/or installation of culverts and inlet/outlet treatments. Staging would occur within Caltrans right-of-way. The project would require permits from the U.S. Army Corps of Engineers (404), California Department of Fish and Wildlife (1600), and the Regional Water Quality Control Board (401). Temporary Construction Easements would be required for work activities outside of Caltrans right-of-way. A permanent easement may be required for the new culvert at Post Mile 42.11.

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.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant impact on the environment for the following reasons:

- The proposed project would have no effect with regard to agriculture and forest resources, geology and soils, land use and planning, mineral resources, noise, population and housing, public services, recreation, utilities and service systems, energy resources, or mandatory findings of significance.
- The proposed project would have less-than-significant impacts with regard to aesthetics, air quality, cultural resources, and transportation/traffic.
- With the following mitigation measures incorporated, the proposed project would have less-than-significant effects to biological resources, hazards and hazardous materials, and hydrology and water quality.
 - A qualified biologist would develop a project-specific capture-and-relocation plan for the foothill yellow-legged frog (FYLF).
 - A qualified biologist would conduct one Worker Environmental Awareness Training for the construction workers prior to the start of all construction activities, focusing on conditions at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57. Awareness training would include a brief review of the biology of the FYLF and guidelines that must be followed by all construction personnel to avoid impacting the frogs while working at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57.
 - A qualified biologist would conduct biological surveys for FYLF no more than 24 hours prior to commencing work activities at the culvert inlets or outlets at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57.

- If FYLF are found during the pre-construction surveys at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57, Caltrans would implement the capture-and-relocate plan for the frog.
- For culvert locations where a Cast in Place Pipe (CIPP) would be used to rehabilitate/upgrade drainage facilities, a preliner would be used prior to CIPP installation in order to protect water quality and aquatic organisms.

Amber Kelley
Office Chief - Redding
North Region Environmental Services
California Department of Transportation

Date

Chapter 1. Proposed Project

Project Title

Feather River Drainage Project

Lead Agency Name and Address

California Department of Transportation, District 2
Office of Environmental Management, MS-30
1657 Riverside Drive
Redding, CA 96001

Contact Person and Phone Number

Chris Quiney
Caltrans Environmental Branch Chief
Phone: (530) 225-3174
Email: chris.quiney@dot.ca.gov

Project Location

The project is located on State Route 70 (SR 70), from Post Mile (PM) BUT-R35.9 to BUT-47.9 in Butte County, and at PM PLU-13.1 in Plumas County (Figures 1 and 2a-2c).

Project Sponsor's Name and Address

California Department of Transportation, District 2
Office of Environmental Management, MS-30
1657 Riverside Drive
Redding, CA 96001

Purpose and Need

The purpose of the proposed project is to repair and replace culverts in accordance with current requirements, as well as construct new drainage facilities where appropriate. The project is needed due to limited culvert capacity, separated culvert joints, damaged culvert headwalls, culvert corrosion, and the need for embankment stabilization at some culvert outlets.

Existing Facilities

The proposed project is located in the North Fork Feather River Canyon in Butte and Plumas Counties, on SR 70. Within the project vicinity SR 70 is a two-lane highway, with 11-foot wide travel lanes and one-foot wide treated shoulders. The North Fork Feather River is adjacent to SR 70. SR 70 is used by local residents, commercial trucks, and recreationalists traveling between the Central Valley and the Eastern Sierras. The North Fork Feather River Canyon is also a corridor for hydroelectric facilities and rail transit. Terrain in the project vicinity is generally comprised of steep, rocky, sparsely-vegetated slopes, or steep slopes covered with cemented rock slope protection (RSP), thick vegetation, or loose rock that pitches down towards the North Fork Feather River.

Project Description (Build Alternative)

The California Department of Transportation (Caltrans), using State funds, is proposing to conduct culvert work along SR 70 in Butte and Plumas Counties, from BUT-R35.94 to BUT-47.81 in Butte County, and at PLU-13.11 in Plumas County. Work would consist of the repair, replacement, upgrading, and/or installation of culverts. Minor vegetation clearing and grubbing would be required in order to access construction areas. Trenching would be required to expose the existing culverts. No borrow or disposal of earthen material is anticipated for this project. All staging and stockpiling would occur within Caltrans right-of-way; Temporary Construction Easements would be required for work outside of Caltrans' right-of-way. A permanent drainage easement would likely be necessary for the culvert installation proposed at BUT-42.11. Work activities proposed for each culvert location are described in Table 1.

Project Alternatives

Two project alternatives, one of which is a “no-build” alternative, were developed as potential solutions to address the purpose and need for the proposed project.

Alternative 1 (Build Alternative) is the preferred alternative as it meets the project purpose and need.

Alternative 2 (No Build Alternative) does not meet the purpose and need of this project. Numerous smaller projects and on-going maintenance would be required to maintain the existing culverts. This strategy would result in a higher cost to the taxpayer, and greater and prolonged environmental disturbance, while only temporarily delaying replacement of the aging culverts.

Permits and Approvals

Proposed work activities would require permits from the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (ACOE), and the Regional Water Quality Control Board (RWQCB).

A Water Pollution Control Program (WPCP) would be prepared and implemented in accordance with Caltrans Standard Specifications for Water Pollution Control (Caltrans, 2010).

Table 1: Proposed Work Activities

Location (Post Mile)	Existing Culvert		New Culvert		Work activities
	Diameter (inches)	Length (feet)	Diameter (inches)	Length (feet)	
BUT-35.94	36	190	NC	NC	Line culvert with Cured-in-Place-Pipeliner; limit vegetation clearing to approximately 5 feet around existing culvert.
BUT-40.26	N/A	N/A	36	80 + 70 DD	Construct new culvert and down drain with energy dissipator at outlet.
BUT-42.11	18	184	24	60 + 100 DD	Abandon existing culvert. Construct new 24" culvert with a down drain and energy dissipator at outlet.
BUT-42.33	18	UK	24	55 + 23 DD	Upsize to 24" culvert with a down drain and energy dissipator at outlet.
BUT-42.66	30	113	NC	NC	Line culvert with Cured-in-Place-Pipeliner.
BUT-43.23	18	135	24	NC	Abandon existing culvert in place. Construct new 24" culvert with a down drain and energy dissipator at outlet.
BUT-43.76	18	35	NC	NC	Replace culvert. Trench up to rock masonry wall, remove existing culvert and grout, and replace culvert.
BUT-43.87	8	15	18	NC	Install approximately 160' of dike under metal beam guardrail. Upsize to 18" culvert, install tapered inlet at existing location, down drain, and RSP.
BUT-45.14	18	65	24	NC	Upsize to 24" culvert. Stabilize embankment on east side of SR 70.
BUT-45.67	18	UK	24	NC	Upsize to 24" culvert. Install Drop Inlet and energy dissipator at outlet.
BUT-46.23	24	UK	NC	NC	Remove headwall, install Drop Inlet.
BUT-46.80	24	81	NC	NC	Line culvert with Cured-in-Place-Pipeliner.
BUT-46.92	36	90	NC	NC	Replace culvert. Install Drop Inlet.
BUT-47.07	18	81	24	NC	Upsize to 24" culvert. Install Drop Inlet.
BUT-47.57	30	66	NC	NC	Replace culvert. Install Drop Inlet.
BUT-47.66	18	57	24	NC	Upsize to 24" culvert. Install Drop Inlet.
BUT-47.81	18	48	24	NC	Upsize to 24" culvert. Install Drop Inlet.
PLU-13.11	N/A	N/A	24	61	Install new 24" culvert. Install Drop Inlet.

NC – No Change; N/A – Not Applicable; DD – Down drain; UK - Unknown

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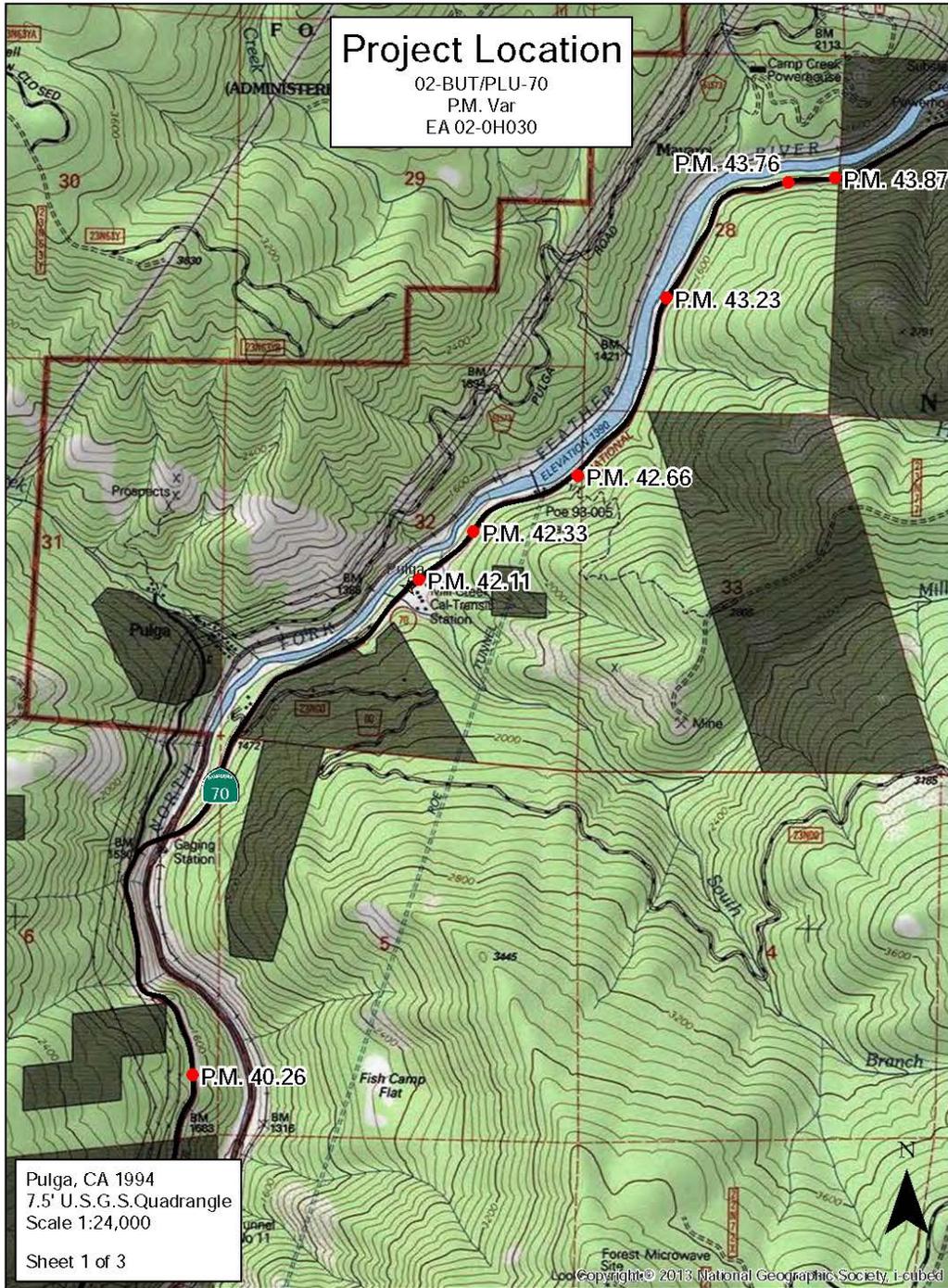


Figure 2a: Project Location Map

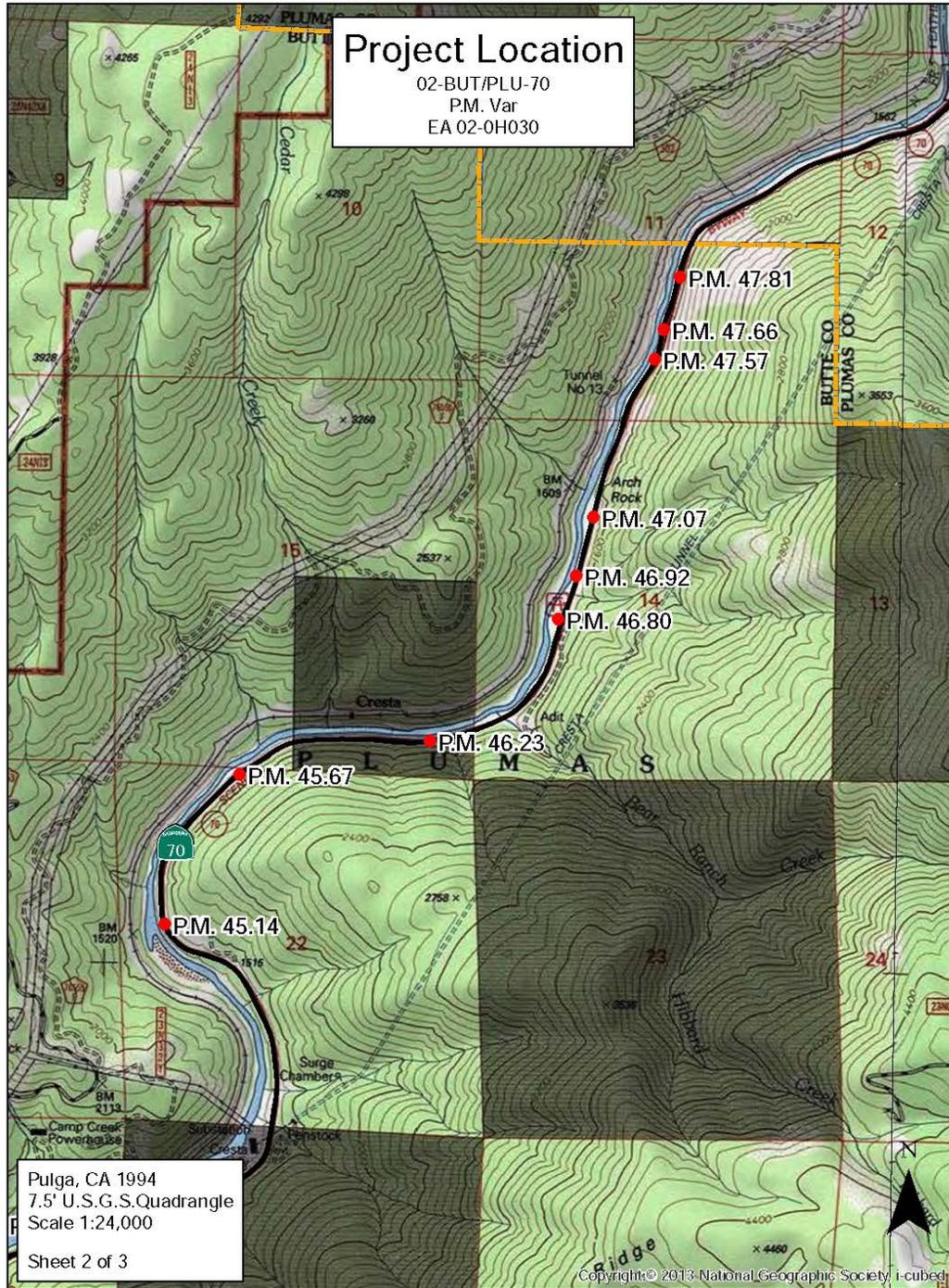


Figure 2b: Project Location Map

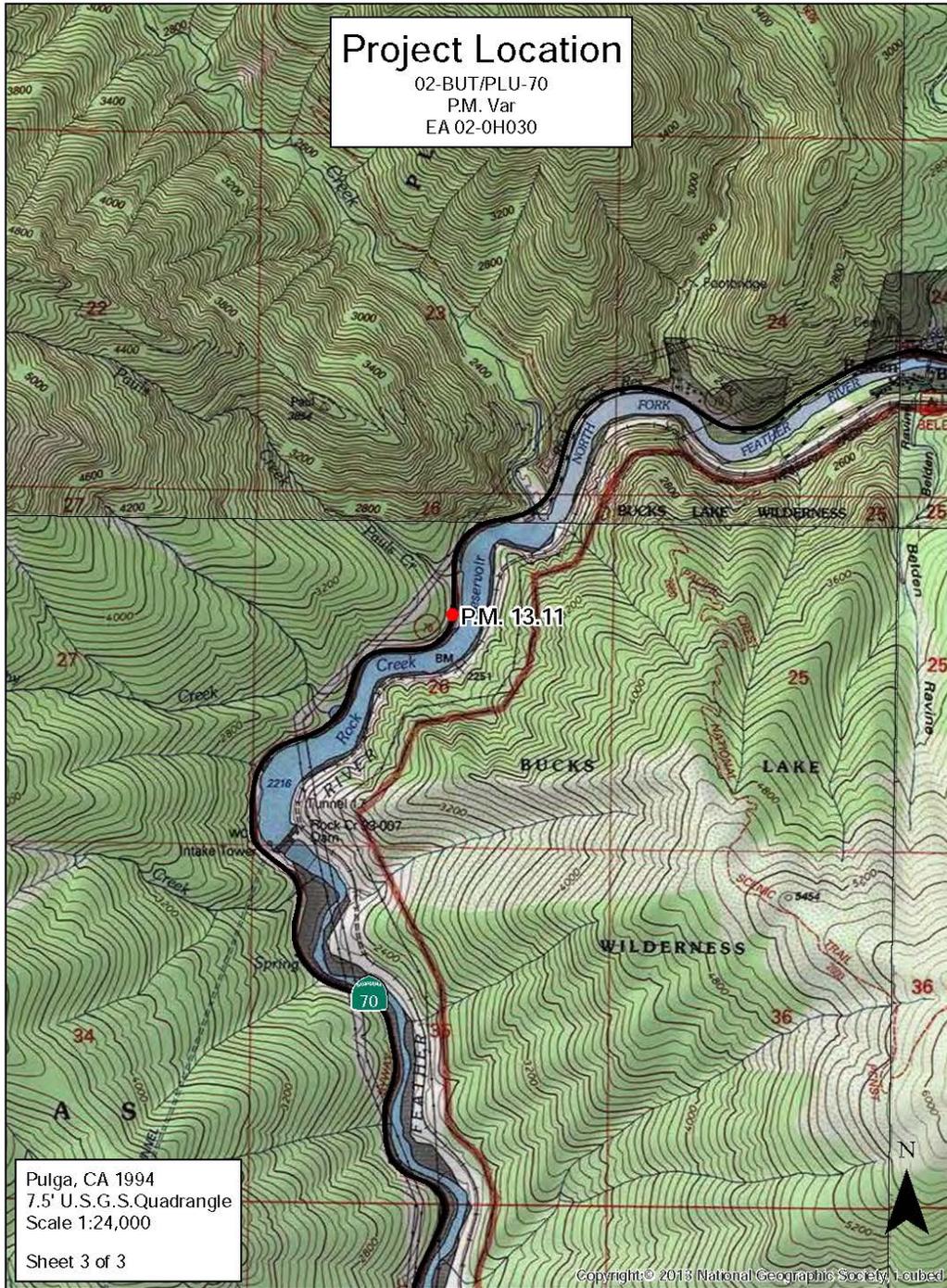


Figure 2c: Project Location Map

Environmental Factors Potentially Affected

The environmental factors checked below may be potentially affected by this project. Please see the CEQA Environmental Checklist for additional information.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input checked="" type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

Environmental Determination

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.				
<input checked="" type="checkbox"/>	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.				
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.				
<input type="checkbox"/>	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.				
<input type="checkbox"/>	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				
<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;"> Signature: <i>Amber Kelley</i> </td> <td style="width: 40%;"> Date: <i>1-25-16</i> </td> </tr> <tr> <td> Printed Name: <i>Amber Kelley</i> </td> <td> For: </td> </tr> </table>		Signature: <i>Amber Kelley</i>	Date: <i>1-25-16</i>	Printed Name: <i>Amber Kelley</i>	For:
Signature: <i>Amber Kelley</i>	Date: <i>1-25-16</i>				
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Chapter 2. 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 in the section following the checklist. 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.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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I. AESTHETICS: Would the project:

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.1: Aesthetics.

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

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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There is no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or a Williamson Act contract in the project vicinity (California Department of Conservation, 2015a). While land in the immediate project vicinity is designated in the Butte County General Plan (Butte County, 2010) as Timber Mountain and in the Plumas County General Plan Update (Plumas County, 2013) as Timber Resource Land, all project activities would occur within Caltrans, PG&E, and federal government right-of-ways.

The proposed project would have no impact to agriculture and forest resources.

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:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.2: Air Quality.

IV. BIOLOGICAL RESOURCES: Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.3: Biological Resources.

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.4: Cultural Resources.

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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is not located in an area that contains a known earthquake fault (California Department of Conservation, 2015b), or that is subject to strong seismic ground shaking, seismic-related ground failure, and/or landslides.

Predominant soil types found within the project area are those associated with steep slopes and/or rock outcrops (Caltrans, Office of Environmental Analysis, North Region, 2015b); soil types found in the project area are not known to be expansive. While some soil types in the proposed project area can have some unstable properties, work activities would be within existing cut slopes and disturbed areas, and would not include new facilities on unstable soil.

The project does not include the use of septic tanks and/or alternative waste water disposal systems.

The proposed project would have no impact to geology and soils.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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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?

An assessment of the greenhouse gas emissions and climate change is included in the section following the checklist. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, 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 and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the section following the checklist.

See Section 3.5: Greenhouse Gas Emissions.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 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?
- 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?
- 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?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.6: Hazards and Hazardous Materials.

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.7: Hydrology and Water Quality.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project would not physically divide an established community.

Land in the immediate project vicinity is designated in the Butte County General Plan (Butte County, 2010) as Timber Mountain and in the Plumas County General Plan Update (Plumas County, 2013) as Timber Resource Land. The project consists of the replacement of existing culverts and installation of new culverts; there is no conflict with regard to any applicable land use plan, policy, and or regulation of an agency with jurisdiction over the project. All project activities would occur within Caltrans, PG&E, and federal government right-of-way.

There are no habitat conservation plans and/or natural community conservation plans that apply to the project site.

The proposed project would have no impact to land use and planning.

XI. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing culverts and installation of new culverts; there would be no impact to mineral resources.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XII. NOISE: Would the project result in:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Noise and vibration would occur during construction and would be temporary and intermittent in nature. Sensitive receptors would include travelers and construction workers. There would be no exposure of persons to excess noise levels and/or vibrations, or a permanent increase in ambient noise levels.

The project site is not located in the vicinity of a public or private airport and/or airstrip.

The proposed project would have no impact to noise.

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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing culverts and installation of new culverts; there would be no impact to population growth, or displacement of housing or people.

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

The proposed project consists of the replacement of existing culverts and installation of new culverts; there would be no impact related to public services. Provisions would be made during construction to minimize traffic delays and to allow access and passage to emergency vehicles.

The proposed project would have no impact to public services.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing culverts and installation of new culverts; there would be no impact to recreation.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XVI. TRANSPORTATION/TRAFFIC: Would the project:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

See Section 3.8: Transportation/Traffic.

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing culverts and installation of new culverts; there would be no impact to utilities and service systems.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project consists of the replacement of existing culverts and installation of new culverts; there would be no impact related to mandatory findings of significance.

Chapter 3. **Discussion of Environmental Impacts**

3.1 Aesthetics

The project site is located along SR 70, an existing highway with cut banks and other road-related features. The project site is not located within a Butte County-designated Scenic Area (Butte County, 2010) or Plumas County-designated Scenic Area (Plumas County, 1984); however, it is within the Feather River National Scenic Byway. The viewshed from the traveler's perspective in the immediate project vicinity consists primarily of trees and irregular terrain.

Minor vegetation removal is necessary for this project in order to accommodate construction activities and safety requirements. In accordance with Caltrans standard construction specifications, areas cleared of vegetation during construction activities would be reseeded following construction.

The proposed project consists of the replacement of existing culverts and installation of new culverts, and would have no impact to scenic vistas or create a new source of light or glare.

Based on the Visual Impact Assessment (Caltrans, 2015a), the project would have a less-than-significant impact with regard to substantially degrading the existing visual character or quality of the site and its surroundings. The project would not adversely affect any "Designated Scenic Resource" as defined by CEQA.

The proposed project would have a less-than-significant impact to aesthetics.

3.2 Air Quality

The proposed project would not increase capacity on SR 70, and would not result in any permanent operational-related air quality impacts.

The proposed project would not expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors.

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM10, would be the primary short-term construction impact, which may be generated during excavation, grading, pavement grinding, and hauling activities. Both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature, and would not result in long-term adverse conditions.

The proposed project would have a less-than-significant impact to air quality.

3.3 Biological Resources

Biological resources-related literature and record searches of the proposed project area included review of numerous databases, lists, and maps, as well as visits to and/or contacts with relevant agencies (Caltrans, Office of Environmental Analysis, North Region, 2015b).

Biological field surveys were conducted on multiple occasions in 2015 to assess the existing environment, gather information on the presence of special status species, and determine project level impacts with regard to biological resources. Surveys included an assessment of aquatic habitat within the project limits.

Results and findings based on the above literature searches, surveys, and analyses are presented below.

Habitats and Natural Communities of Concern

No natural communities of special concern were observed in the proposed project area.

Habitats of concern within the proposed project area include wetlands, waters, and riparian habitat. These habitats are protected by both federal and State laws and regulations, and impacts to these resources require permits or agreements from resource agencies.

Wetlands

A wetland delineation completed by Caltrans identified approximately 0.0017 acres (74 square feet) of wetlands within the Environmental Study Limits (ESL), as described in Table 2.

Table 2. Wetland Habitat and Impacts within the ESL

Post Mile	Acres	Habitat Type	Temporary Impacts (acres)	Permanent Impacts (acres)
BUT-46.80	0.0012	Perennial Wetland	0	0
BUT-47.07	0.0005	Perennial Seep	0.0003	0.0003
TOTAL	0.0017	-	0.0003	0.0003

Project activities at BUT-46.80 would not impact the perennial wetland. The work does not include excavation or fill of this wetland, therefore no impacts are anticipated.

Project activities at BUT-47.07 are expected to result in both temporary and permanent impacts to the perennial seep. The culvert at this location would be upsized via a cut-and-cover technique and a drop inlet structure would be installed at the inlet. The drop inlet would permanently fill 0.0003 acres (12 square feet) of the seep. Temporary impacts associated with work around the drop inlet would temporarily impact an additional 0.0003 acres (12 square feet) of the seep.

The wetlands in the ESL represent a small amount of common wetland types that occur along the North Fork Feather River. Although the proposed project would result in temporary and permanent impacts to the perennial seep at BUT-47.07, the impact acreage is small. Additionally, the proposed project may provide a benefit to the wetlands within and adjacent to the study area in the long term because it would reduce highway flooding, which would maintain continuity of flows between wetlands on both sides of SR 70. Therefore, the proposed project would not significantly impact wetlands, directly or indirectly, on a local or regional level.

The proposed project would have a less-than-significant impact to wetlands; however, in accordance with Caltrans standard construction specifications, minimization of project-related impacts to wetlands would include the following activities:

- Appropriate storm water-related Caltrans Best Management Practices (BMPs) would be implemented to protect water quality.
- All disturbed areas would be restored to original contours upon project completion and treated for erosion control to prevent erosion into wet areas.

Waters

An investigation of ordinary high water marks (OHWM) completed by Caltrans biological staff identified four drainage features within the ESL that convey water from culverts into the North Fork Feather River or that convey water into culverts that appear to transition to sub-surface flow, as described in Table 3.

Table 3. Streams and Impacts within the ESL

Post Mile	Acres	Waters Type	Temporary Impacts (acres)	Temporary Impacts (linear feet)	Permanent Impacts (acres)	Permanent Impacts (linear feet)
BUT-35.94	0.0015	Intermittent	0.001	10	0	0
BUT-46.80	0.0010	Intermittent	0	0	0	0
BUT-46.92	0.0005	Intermittent	0.0003	3	0.0003	4
BUT-47.57	0.0008	Intermittent	0.0003	3	0.0003	4
TOTAL	0.0038		0.0016	16	0.0006	8

Work proposed at BUT-35.94 only involves lining the culvert and no permanent impacts to the intermittent waters are anticipated. Minor disturbance within the OHWM upstream of the culvert inlet may occur from foot traffic and temporary placement of equipment associated with installing the lining material. The temporary work would occur within approximately 0.001 acres (10 linear feet) and would not involve excavation or fill within the OHWM.

Work proposed at BUT-46.80 also only involves lining the culvert, and no temporary or permanent impacts to waters are anticipated, as all work can be conducted from the roadway.

Work at BUT-46.92 and BUT-47.57 involves in-kind replacement of the existing culverts using a cut-and-cover technique as well as installation of a drop-inlet structure at each location. Permanent impacts to 0.0003 acres (4 linear feet) of waters are anticipated at both BUT-46.92 and BUT-47.57. Temporary impacts associated with excavating an area to install the drop inlets and then replacing material around the new structures would impact approximately 0.0003 acres (3 linear feet) at each location.

The waters in the ESL represent a small portion of common stream types that occur along the North Fork Feather River. Although the proposed project would result in temporary and permanent impacts to the waters at BUT-46.92 and BUT-47.57, the impact acreage is small. Replacement of the culverts is expected to improve the function and value of these features by effectively maintaining continuity of flows on both sides of SR 70. Therefore, the proposed project would not significantly impact waters, directly or indirectly, on a local or regional level.

The proposed project would have a less-than-significant impact to waters.

Riparian Habitat

Project biologists observed riparian habitat that intersects the ESL at BUT-46.23, BUT-46.80, BUT-46.92, and PLU-13.11, as described below in Table 4.

Table 4. Riparian Habitat and Impacts within the ESL

Post Mile	Total Acres	Temporary Impacts (acres)	Temporary Impacts (square feet)	Permanent Impacts (acres)	Permanent Impacts (square feet)
BUT-46.23	0.0042	0	0	0	0
BUT-46.80	0.0079	0	0	0	0
BUT-46.92	0.0034	0.0006	25	0	0
PLU-13.11	0.0051	0.0009	64	0.0006	25
TOTAL	0.0206	0.0015	89	0.0006	25

Work at BUT-46.23 and BUT-46.80 would not extend into the riparian habitat that occurs in the ESL, therefore no impacts to riparian habitat are anticipated at these locations.

Willow and alder trimming at the culvert outlet at BUT-46.92 would result in approximately 0.0006 acres (25 square feet) of temporary impacts to riparian habitat. No permanent impacts are anticipated at BUT-46.92.

Work at PLU-13.11 involves installation of a new culvert, which would result in temporary impacts to riparian habitat in the form of approximately 0.0009 acres (64 square feet) of willow trimming to clear access to the new culvert outlet location. Permanent removal of riparian vegetation would result in approximately 0.0006 acres (25 square feet) of permanent impacts at PLU-13.11 to accommodate the new culvert outlet.

A 1997 survey conducted by the California Department of Water Resources identified approximately 21,000 acres of native riparian vegetation in Plumas County (California Department of Water Resources, 2007). Although the proposed project would result in 0.0015 acres of temporary impacts and 0.0006 acres of permanent impacts to riparian habitat at BUT-46.92 and PLU-13.11, this is only a fraction of the total riparian vegetation area within Plumas County. Natural revegetation and recruitment is expected to quickly replace riparian functions and values over the area lost to permanent impacts. Impacts from the proposed project will not have a substantial adverse effect, either directly or indirectly, on the riparian habitat on a local or regional level, and have been determined to be less than significant.

The proposed project would have a less-than-significant impact to riparian habitat; however, in accordance with Caltrans standard practices, minimization of project-related impacts to riparian habitat would include the following activities:

- Tree removal would not exceed the minimum necessary to complete the project activities.
- Woody vegetation in riparian areas that are subject to temporary impacts would be trimmed instead of completely removed to promote rapid regrowth.

Special-Status Animal Species

Based on database queries, 24 individual special-status wildlife species and an additional 23 migratory birds had the potential to occur within the ESL. A comprehensive evaluation of each special status species' potential to occur in the ESL is included in Appendix A (migratory birds are not addressed individually by taxon). The ESL supports suitable habitat for eight of the 24 species and three of those species are known to occur within the ESL. Although no special status wildlife species were observed during reconnaissance surveys, five wildlife species merit further discussion based on their presence, assumed presence, or moderate potential for occurrence in the ESL.

Foothill Yellow-legged Frog

The foothill yellow-legged frog (FYLF) is a California species of special concern, and is currently under review for federal listing as threatened or endangered by the U.S. Fish and Wildlife Service. This species meets the criteria of sensitivity outlined in the current CEQA Guidelines.

No protocol-level surveys for FYLF were conducted as part of the biological review for this project. However, draft FYLF survey data collected by consultants along the North Fork Feather River indicate that local populations of frogs use river reaches within the ESL as critical breeding ground (Ganda, 2013). Geographic data from USFS also show occurrences of this frog in the river adjacent to the ESL near BUT-45.14, BUT-45.67, BUT-46.23, BUT-46.80, BUT-46.92, and BUT-47.07 (USDA, 2015).

Although Caltrans biologists did not observe any FYLF during reconnaissance surveys for the project, adult individuals of the frog are assumed present in the ESL at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57 because the culverts at these locations are within 120 feet of known breeding habitat and the culverts may provide dispersal habitat between breeding and overwintering sites. There are also known breeding sites in the Feather River adjacent to but outside of the ESL of the project limits for BUT-45.14, BUT-45.67, and BUT-46.23. However, there is no suitable habitat at BUT-45.14, BUT-45.67, and BUT-46.23 and therefore this frog is not expected to be present at these locations.

Work at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57 would involve culvert lining, culvert upsizing, and installation of drop inlets. If FYLF are present in the ESL during construction, there is a potential for direct impacts to FYLF. Temporary indirect impacts may occur by preventing the frog's movement through the culverts during work activities. Permanent impacts to potential dispersal habitat are not anticipated because culvert replacement or rehab would improve connectivity between the North Fork Feather River and seeps or waters on the other side of SR 70 at BUT-46.92, BUT-47.07, and BUT 47.57. Indirect impacts would also be avoided by installing culverts at BUT-46.92, BUT-47.07, and BUT 47.57, so they do not represent a barrier to dispersal for this species.

To avoid potential FYLF mortality, the following mitigation measures would be implemented in order to exclude FYLF from active construction areas:

- A qualified biologist would develop a project-specific capture-and-relocation plan for the FYLF.
- A qualified biologist would conduct one Worker Environmental Awareness Training for the construction workers prior to the start of all construction activities, focusing on conditions at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57. Awareness training would include a brief review of the biology of the FYLF and guidelines that must be

followed by all construction personnel to impacting the frogs while working at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57.

- A qualified biologist would conduct biological surveys for FYLF no more than 24 hours prior to commencing work activities at the culvert inlets or outlets at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57.
- If FYLF are found during the pre-construction surveys at BUT-46.80, BUT-46.92, BUT-47.07, and BUT 47.57, Caltrans would implement the capture-and-relocate plan for the frog.
- For culvert locations where a Cast in Place Pipe (CIPP) would be used to rehabilitate/upgrade drainage facilities, a preliner would be used prior to CIPP installation in order to protect water quality and aquatic organisms.

The proposed project may have a significant impact to FYLF; with implementation of the above mitigation measures, impacts related to FYLF would be brought to a level that is less-than-significant.

Bird Species of Special Concern

Golden eagle (*Aquila chrysaetos*) and California spotted owl (*Strix occidentalis occidentalis*) are CDFW species of special concern and meet the criteria for sensitivity under CEQA guidelines. American peregrine falcon (*Falco peregrinus anatum*) is a CDFW species of special concern and fully-protected species. Bald eagle (*Haliaeetus leucocephalus*) is a State endangered bird. The eagles are also protected under the BGEPA. The Federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3513, and 3800 protect migratory birds, their nests, and their eggs from disturbance or destruction. Migratory birds are not assessed here by taxon, however a list of the 22 additional migratory bird species of concern for this project is included in Appendix A.

During reconnaissance-level project surveys, Caltrans biologists discovered that some portions of the ESL represent suitable foraging and nesting habitat for these species. No species-specific protocol-level surveys were conducted for any of these five bird species of special concern during project surveys. However, records of recent observations by qualified biologists indicate presence of each of these species in the North Fork Feather River Canyon. The California spotted owl and golden eagle are assumed present and the bald eagle and peregrine falcon have a moderate potential for occurrence in the ESL. Migratory birds may nest in natural habitat within the ESL.

Construction noise is not anticipated to disturb any birds nesting within the ESL, as noise levels of temporary work activities would not exceed the ambient noise levels of typical activities in the North Fork Feather River Canyon.

In accordance with Caltrans standard construction practices, vegetation would be removed outside of the bird nesting season (i.e., removal would occur between September 1 and January 31).

The proposed project would have a less-than-significant impact to bird species of special concern.

Special Status Plant Species

Based on database queries, 57 individual special-status plant species had the potential to occur within the ESL. A comprehensive evaluation of each species' potential to occur in the ESL is included in Appendix A. The ESL supports suitable habitat for 26 of the 57 species and nine of

those species are known to occur within the ESL. One special status plant was observed within the ESL during protocol-level botanical surveys, and this plant is discussed in more detail below.

Cantelow's lewisia

Cantelow's lewisia (*Lewisia cantelovii*) is a perennial vascular plant species that is ranked 1.B2 on the CNPS Inventory of Rare and Endangered Plants, which means that the plant is rare throughout its range and moderately threatened in California. This plant does not have federal or state protected status, but based on its CNPS listing status, it meets the criteria for sensitivity outlined in CEQA Guidelines.

Results of protocol-level botanical surveys showed two individuals of Cantelow's lewisia present approximately eight feet above the culvert inlet at BUT-47.66. There is a steep exposed granite dome face that extends vertically from the culvert inlet, and the plant is attached to this rock directly above the inlet.

Work activities proposed at BUT-47.66 include upsizing the existing culvert and installing a drop inlet. These activities are not anticipated to result in impacts to the Cantelow's lewisia because the plant occurs well above the area of work at the culvert inlet, which is flush with or below the level of the roadway surface.

The proposed project would have a less-than-significant impact to special-status plant species; however, an Environmentally Sensitive Area would be shown on the project's engineering drawings for the Cantelow's lewisia and this area would be called out in the plans to be protected in place.

Threatened and Endangered Species

The proposed project would have no impact to federally-listed or state-listed threatened and/or endangered species.

Invasive Species

Several invasive plant species were observed within the proposed project area, predominantly within one foot of the edge of pavement or within roadway turnouts that would be used for staging.

The proposed project would have a less-than-significant impact with regard to invasive species; however, to reduce the spread of invasive plant species and minimize the potential for disturbance that results in a decrease in prevalence of native plant species Caltrans would implement the following standard construction practices, as practicable:

- Plant species used for erosion control would consist of native species or non-persistent hybrids that would prevent invasive species from colonizing disturbed areas.
- Erosion control materials such as straw and seed mixes would be certified weed-free.
- Native vegetation would not be removed unless necessary for construction of the project.
- Caltrans would not allow transport of soil and/or plant materials from any areas that support invasive species to areas that support native-dominated plant communities.
- Gravel and/or fill material to be placed in relatively weed-free areas would come from weed-free sources, if at all practicable.

3.4 Cultural Resources

Literature and record searches of the proposed project area included visits to and/or contacts with a number of repositories, agencies, organizations, and Native American representatives. The cultural resources field review for this project was conducted in the spring and summer of 2015. The purpose of these efforts was to identify and evaluate any cultural resources that may exist within the project area, and to assess any effects that the proposed project might have related to the cultural resources. One historical resource that has the potential to be affected by the proposed project was identified within and/or immediately adjacent to the project limits, the Feather River Highway District (Caltrans, Office of Environmental Analysis, North Region, 2015a).

The Feather River Highway District (FRHD) is approximately 48 miles long and lies between Jarbo Gap in Butte County at BUT-35.57 and Keddie in Plumas County at PLU-36.00. The FRHD is eligible for the National Register of Historic Places at a state level of significance based on its period of construction (1927-1937). It is associated with the state's efforts to construct an all-weather highway between Oroville and Quincy through rugged terrain, and around pre-existing hydroelectric facilities and a railroad main line. It is also eligible as a significant example of highway engineering and architecture.

Though not eligible individually, a rock masonry wall located at BUT-43.82 was determined to be a contributor to the FRHD based on the fact that it is an architectural feature representative of the time and period of construction of the FRHD. Proposed work activities near the rock masonry wall include the removal and replacement of a pipe and inlet that are not contributing elements to the FRHD; the pipe runs through the rock masonry wall, below the profile of the highway. The pipe would be replaced with a new pipe that is the same diameter as what is there currently, and work would be limited to removal and replacement of grout currently existing in the rock masonry wall. The rock masonry wall would remain intact; there would be no impact to the wall's shape, width, or materials it is constructed from, and work would not be visible to the traveling public.

The proposed project would result in no adverse effect to historic resources, as work would be completed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, as outlined above; the proposed project would have a less-than-significant impact to historic resources.

It is Caltrans' policy to avoid cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in the area until a qualified archaeologist can evaluate the nature and significance of the find.

There are no known paleontological resources in the proposed project limits; the proposed project is not expected to have an impact to paleontological resources.

The proposed project would have a less-than-significant impact to cultural resources.

3.5 Greenhouse Gas Emissions

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. Research from such establishments as the Intergovernmental Panel on Climate Change (IPCC) 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 (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles) make up the largest source (second to electricity generation) of GHG emitting sources. The dominant GHG emitted is CO₂, primarily from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation, including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change. Relevant legislation includes the following policies:

- Assembly Bill 1493 (AB 1493), Pavley
- Executive Order (EO) S-3-05: (signed on June 1, 2005, by former Governor Arnold Schwarzenegger)
- AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley
- Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger)
- Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger)
- Senate Bill 97 (SB 97) Chapter 185, 2007

Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to the Department's stewardship goal to preserve and enhance California's resources and assets.

Federal

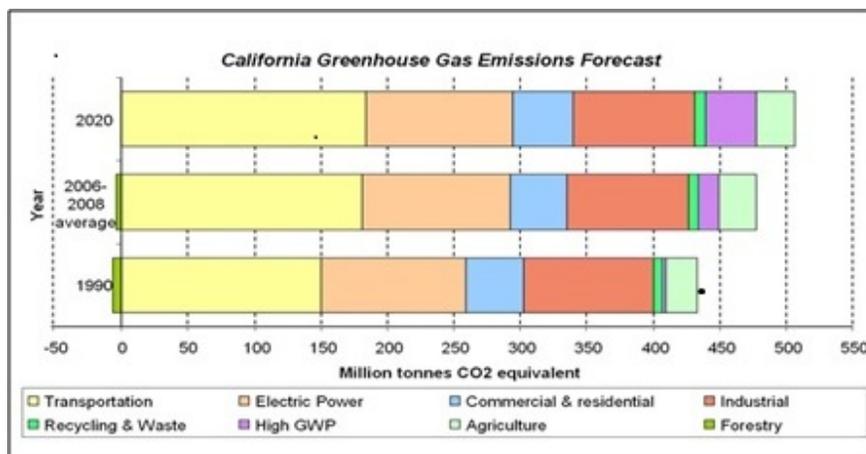
Although climate change and GHG reduction is a concern at the federal level, currently there are no regulations or legislation that have been enacted specifically to address GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate

change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Despite the lack of Federal GHG regulations and legislation, FHWA, as well as the National Highway Traffic Safety Administration (NHTSA) and U.S. EPA, are taking steps to lessen climate change impacts by improving transportation system efficiency, creating cleaner fuels, reducing the growth of vehicle hours travelled, and enabling the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines.

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.¹ 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 in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Figure 3: California Greenhouse Gas Forecast

¹ 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).

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans, published in December 2006.²

The purpose of the project is to repair and replace culverts in accordance with current requirements, as well as construct new drainage systems where appropriate. The proposed project would not increase capacity or vehicle miles travelled, therefore no increases in operational GHG emissions are anticipated.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications, and by implementing traffic management practices 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 mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

While construction would result in a slight increase in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. 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 with regard to the project's direct impact and its contribution on the cumulative scale related to climate change. However, Caltrans is firmly committed to implementing measures to help reduce GHG emissions, as discussed below.

Greenhouse Gas Reduction Strategies

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)³.

Greenhouse Gas Mitigation

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement the Executive Orders S-3-05 and S-01-07 and help achieve the targets set

² Caltrans Climate Action Program is located at the following web address:

http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

³ http://climatechange.transportation.org/ghg_mitigation/

forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year.

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- According to Caltrans Standard Specifications, the contractor must comply with all of the Butte County Air Quality Management District and Northern Sierra Air Quality Management District rules, ordinances, and regulations regarding to air quality restrictions.
- Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C “Emission Reduction” and Section 14-9.03 “Dust Control”. Provision 14-9.02 “Air Pollution Control” requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.

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. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by 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. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as the Department as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance, and operational improvements of the system, and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

3.6 Hazards and Hazardous Materials

The project does not involve the routine transport or disposal of hazardous materials, and is not located on a known hazardous materials site (Caltrans, North Region Office of Environmental Engineering, 2015).

The project is not in the vicinity of an existing or proposed school, or public or private airport and/or airstrip.

The project would not interfere with an emergency response plan and/or emergency evacuation plan, or expose people or structures to wildland fire-related hazards, as there are no residents in the project vicinity.

Use of a Cured-In-Place-Pipeliner (CIPP) is proposed for work activities at BUT-35.94, BUT-42.66, and BUT-46.80. If groundwater or perched/spring water is present in the culvert vicinity there is the potential for styrene (a chemical used in the CIPP) to leach into the groundwater and/or perched/spring water, which may result in a significant impact to water quality and/or aquatic organisms. For culvert locations where a CIPP would be used to rehabilitate/upgrade drainage facilities, a preliner would be used prior to CIPP installation in order to protect water quality and aquatic organisms.

The proposed project may have a significant impact with regard to hazards and hazardous materials; with implementation of the above mitigation measure, impacts related to hazards and hazardous materials would be brought to a level that is less-than-significant.

3.7 Hydrology and Water Quality

The project consists of the replacement of existing culverts and installation of new culverts, and would not impact groundwater supplies or create additional runoff water. Installation of new drainage facilities would result in a minor, permanent redirection of some existing water flows; however, the proposed project would not result in a change in total drainage volume in the project vicinity (Caltrans, Office of Roadside Maintenance, 2015).

As stated in Section 3.6, for culvert locations where a CIPP would be used to rehabilitate/upgrade drainage facilities, a preliner would be used prior to CIPP installation in order to protect water quality and aquatic organisms.

The project site is not within a 100-year flood hazard area.

There are no people and/or structures in the project vicinity that would be impacted by the proposed project.

The project site is not located in an area that would be impacted by a seiche, tsunami, or mudflow.

In accordance with Caltrans standard construction specifications, the contractor would be required to submit a Water Pollution Control Program (WPCP). The WPCP would be prepared in accordance with Caltrans' Storm Water Management Program and the Statewide Caltrans NPDES Permit issued by the State Water Resources Control Board. The WPCP would identify potential sources of pollution and includes Caltrans' Best Management Practices (BMPs) that would be implemented to avoid and/or minimize potential water quality-related impacts in the proposed project vicinity (Caltrans, 2015b).

The proposed project may have a significant impact to with regard to hydrology and water quality; with implementation of the above mitigation measure, impacts related to hydrology and water quality would be brought to a level that is less-than-significant.

3.8 Transportation and Traffic

The proposed project would not result in conflicts or impacts related to an applicable congestion management program, air traffic patterns, increased hazards due to a design feature, inadequate emergency access, and/or adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

Vehicle traffic during construction would be controlled using the One Way Reversing Traffic Control method. Construction flagger personnel would be placed at both ends of the work area for each culvert location, and traffic would be able to proceed one direction at a time. Idling time for vehicles would be limited to the amount of time it takes for traffic from one direction to pass through the construction site. Construction would occur at one or two culvert locations at a time, and would continue to the next culvert location when work at prior locations was completed. Non-motorized traffic would be escorted through the construction area, or a designated route would be identified at each construction location.

The proposed project would have a less-than-significant impact to transportation and traffic.

Chapter 4. List of Preparers

This Initial Study was prepared by the California Department of Transportation, North Region Office of Environmental Management, with input from the following staff:

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Contribution: Document preparation oversight

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Jennifer White, Landscape Architect
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Contribution: Initial Site Assessment for Hazardous Waste

Rosalie Wilson, Project Biologist
Contribution: Natural Environment Study

Sean Shepard, Project Engineer
Contribution: Preliminary Drainage Report

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Appendix A: Special Status Biological Resources in the Project Area

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
WILDLIFE						
Amphibians						
<i>Rana boylei</i>	foothill yellow-legged frog	-/-/-	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	Yes	Assumed present. No individuals observed in the ESL during site visits, however local frog monitoring documented occurrences in some of the channels drained by project culverts.
<i>Rana cascadae</i>	Cascades frog	-/-/-	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	Montane aquatic habitats such as mountain lakes, small streams, and ponds in meadows; open coniferous forests. Standing water required for reproduction. Hibernates in mud on the bottom of lakes and ponds during the winter.	No	Unlikely. Suitable habitat is not present in the ESL. ESL is mostly below species' typical elevation range.
<i>Rana draytonii</i>	California red-legged frog	FT/-/-	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	Lowlands & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	No	Unlikely. Although the ESL is generally within the species' historical range, there is not suitable habitat in the ESL for this species.
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog	FE/ST/-	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered USFS_S-Sensitive	Always encountered within a few feet of water. Tadpoles may require 2 - 4 years to complete their aquatic development. Occurs above 4,000 feet elevation.	No	Not Present. There is not suitable habitat in the ESL for this species. ESL is well below species' typical elevation range.
Birds						
<i>Accipiter gentilis</i>	northern goshawk	-/-/-	BLM_S-Sensitive CDF_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Red fir,	Yes	Unlikely. Individuals of this taxon may use portions of the ESL for dispersal or foraging, however, there is

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
				lodgepole pine, Jeffrey pine, and aspens are typical nest trees.		no suitable nesting habitat present in the ESL.
<i>Aquila chrysaetos</i>	golden eagle	-/-/-	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	Rolling foothills, mountain areas, sage-juniper flats, & desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Yes	Assumed Present. There are recent US Forest Service records of this species' presence within 1/4 mile of the ESL.
<i>Empidonax traillii</i>	willow flycatcher	-/SE/-	IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000-8000 ft elevation Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	No	Unlikely. Although the ESL of Culvert 18 is generally within the species' range, it is at the very low end of its elevation range. The closest occurrence records are approximately 8 miles away, 2000' higher in elevation and in mountain meadow habitat.
<i>Falco peregrinus anatum</i>	Peregrine falcon	FD/SD/-	CDF_S-Sensitive CDFW_FP-Fully Protected USFWS_BCC-Birds of Conservation Concern	Breed in open landscapes with cliffs (or skyscrapers) for nest sites; found nesting at elevations up to about 12,000 feet, as well as along rivers and coastlines or in cities.	Yes	Moderate. Recent USFS records indicate presence within 1 mile of the ESL. Suitable nesting habitat is present within 1/4 miles of the ESL. No suitable nesting habitat is present in the ESL. Presence in the ESL would likely be for brief foraging events.
<i>Grus canadensis tabida</i>	greater sandhill crane	-/ST/-	BLM_S-Sensitive CDFW_FP-Fully Protected USFS_S-Sensitive	Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 mi of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites	No	Unlikely. Suitable habitat for individuals of this taxon is not present in the ESL.

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
<i>Haliaeetus leucocephalus</i>	bald eagle	FD/SE/-	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	Ocean shore, lake margins, & rivers for both nesting & wintering. Most nests within 1 mi of water. Nests in large, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.	Yes	Moderate. Recent USFS records indicate presence within 1 mile of the ESL. Suitable nesting habitat is present within 1/4 miles of the ESL. No suitable nesting habitat is present in the ESL. Presence in the ESL would likely be for brief foraging events.
<i>Riparia riparia</i>	bank swallow	-/ST/-	BLM_S-Sensitive IUCN_LC-Least Concern	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	No	Not Present. Riparian habitat in the ESL consists primarily of granite boulders set in concrete, not fine-textured soils. No suitable nesting habitat is present in the ESL. The closest occurrence record is >16 miles to the southeast.
<i>Strix occidentalis occidentalis</i>	California spotted owl	-/-/-	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	Mixed conifer forest, often with an understory of black oaks & other deciduous hardwoods. Canopy closure >40%. Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water.	Yes	Assumed Present. Forest Service and CDFW records as recent as 2007 indicate positive detections of individuals of this taxon within 1/4 mile of the ESL.
Fish						
<i>Hypomesus transpacificus</i>	Delta smelt	FT/SE/-	AFS_TH-Threatened IUCN_EN-Endangered	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	No	Not Present. The ESL is not in the range of and does not contain any suitable habitat for the Delta smelt. Project activities will not affect water supplies that would reach the smelt's known range.

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
<i>Oncorhynchus mykiss irideus</i>	California Central Valley steelhead DPS	FT/-/-	AFS_TH-Threatened	Populations in the Sacramento and San Joaquin rivers and their tributaries. Aquatic Sacramento/San Joaquin flowing waters	No	Not Present. There is no suitable aquatic habitat in the ESL for individuals of this taxon. Project activities will not affect water supplies that reach its known range.
<i>Mylopharodon conocephalus</i>	hardhead	-/-/-	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms & slow water velocity. Not found where exotic centrarchids predominate.	No	Not Present. There is no suitable aquatic habitat in the ESL for individuals of this taxon.
Insects						
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT/-/-		Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	No	Unlikely. There are no elderberry shrubs in the ESL.
Mammals						
<i>Aplodontia rufa californica</i>	Sierra Nevada mountain beaver	-/-/-	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	Dense growth of small deciduous trees & shrubs, wet soil, & abundance of forbs in the Sierra Nevada & east slope. Needs dense understory for food & cover. Burrows into soft soil. Needs abundant supply of water.	No	Unlikely. The ESL is not within the species' known range.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	-/SC-ST/-	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls & ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	No	Unlikely. Suitable maternity roosting habitat is not present in the ESL for this species.

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
<i>Lasionycteris noctivagans</i>	silver-haired bat	-/-/-	IUCN_LC-Least Concern WBWG_M-Medium Priority	Primarily a coastal & montane forest dweller feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.	No	Unlikely. Trees in the ESL are not mature enough to provide roosting habitat and there are no snags in the ESL. Maternity roosting habitat is not present in the ESL.
<i>Martes caurina</i>	Pacific marten	-/-/-	IUCN_LC-Least Concern USFS_S-Sensitive	Mixed evergreen forests with more than 40% crown closure along North Coast & Sierra Nevada, Klamath & Cascade mountains. Needs variety of different-aged stands, particularly old-growth conifers & snags which provide cavities for dens/nests.	No	Unlikely. There is no suitable forest with >/= 40% crown cover in the ESL. Suitable habitat is not present for this species.
<i>Myotis thysanodes</i>	fringed myotis	-/-/-	BLM_S-Sensitive IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	No	Unlikely. There are no suitable maternity roosting sites.
<i>Myotis volans</i>	long-legged myotis	-/-/-	IUCN_LC-Least Concern WBWG_H-High Priority	Most common in woodland & forest habitats above 4000 ft. Trees are important day roosts; caves & mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	No	Unlikely. ESL is below species' elevation range. Suitable habitat is not present in the ESL.
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	-/ST/-	USFS_S-Sensitive	Historically found from the Cascades down to the Sierra Nevada. Found in a variety of habitats from wet meadows to forested areas. Use dense vegetation & rocky areas for cover & den sites. Prefer forests interspersed w/ meadows or alpine fell-fields.	Yes	Unlikely. The ESL is within this species' known historic range, however no suitable denning habitat is present in the ESL. Presence in the ESL is likely to be brief and transient in nature.
Mollusks						

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
<i>Margaritifera falcata</i>	western pearlshell	-/-		Aquatic. Prefers lower velocity waters.	No	Unlikely. There are no lower velocity waters with appropriate anchoring substrate for this mollusk in the ESL. Individuals of this taxon have been observed in the nearby N. Fork of the Feather River, but the ESL does not extend into suitable habitat for this species.
Reptiles						
<i>Actinemys marmorata</i>	western pond turtle	-/-	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	No	Unlikely. Suitable habitat is not present in the ESL for this species. There are no deep pools, and no loose substrate for egg laying in the ESL.
PLANTS						
<i>Agrostis hendersonii</i>	Henderson's bent grass	-/-/3.2		Valley and foothill grassland, vernal pools. Little information exists; moist places in grassland or vernal pool habitat. 70-305 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Allium jepsonii</i>	Jepson's onion	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Cismontane woodland, lower montane coniferous forest. On serpentine soils in Sierra foothills, volcanic soil on Table Mtn. on slopes and flats; use in an open area. 450-1130m	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Allium sanbornii</i> var. <i>sanbornii</i>	Sanborn's onion	-/-/4.2		Chaparral, cismontane woodland, lower montane coniferous forest. Usually on serpentine outcrops. 260-1510 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
						during botanical surveys in the ESL in 2015.
<i>Anomobryum julaceum</i>	slender silver moss	-/-/4.2		Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. 100-1000 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Arctostaphylos mewukka</i> ssp. <i>truei</i>	True's manzanita	-/-/4.2		Chaparral, lower montane coniferous forest. 425-1390 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Aspidotis carlotta-halliae</i>	Carlotta Hall's lace fern	-/-/4.2		Chaparral, cismontane woodland. Generally serpentine slopes, crevices, or outcrops. 100-1400 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Astragalus webberi</i>	Webber's milk-vetch	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest. Open brushy slopes and flats in xeric pine forest or mixed pine-oak forest. 800-1220m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Boechera constancei</i>	Constance's rockcress	-/-/1B.1	USFS_S-Sensitive	Chaparral, lower montane coniferous forest, upper montane coniferous forest. Mostly on open, bare, serpentine slopes and outcrops in chaparral and woodland. 975-2025 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Botrychium minganense</i>	mingan moonwort	-/-/2B.2	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, bogs and fens. Creek banks in mixed conifer forest. 1455-2105 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed

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						during botanical surveys in the ESL in 2015.
<i>Botrychium montanum</i>	western goblin	-/-/2B.1	USFS_S-Sensitive	Lower montane coniferous forest. Creek banks in old-growth forest. 1465-2130 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Brasenia schreberi</i>	watershield	-/-/2B.3		Freshwater marshes and swamps. Aquatic from water bodies both natural and artificial in California. 30-2200 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Brodiaea sierrae</i>	Sierra foothills brodiaea	-/-/4.3		Chaparral, cismontane woodlands. Usually on gabbro or serpentine. Occasionally on other soil types where conditions limit cover of other plants. 50-945 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Bulbostylis capillaris</i>	thread-leaved beakseed	-/-/4.2		Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. 395-2075 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Calycadenia oppositifolia</i>	Butte County calycadenia	-/-/4.2	USFS_S-Sensitive	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, meadows and seeps. Dry, often stoney plains and rock outcrops, on serpentine or volcanic soils. 90-945 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Cardamine pachystigma</i> var. <i>dissectifolia</i>	dissected-leaved toothwort	-/-/1B.2		Chaparral, lower montane coniferous forest. Serpentine outcrops and gravelly serpentine talus. 255-2100 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed

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						during botanical surveys in the ESL in 2015.
<i>Carex limosa</i>	mud sedge	-/-/2B.2		Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. In floating bogs and soggy meadows and edges of lakes. 1200-2700 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Carex sheldonii</i>	Sheldon's sedge	-/-/2B.2		Lower montane coniferous forest, marshes and swamps, riparian scrub. Mesic sites; along creeks and in wet meadows. 1200-2015 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Clarkia gracilis</i> ssp. <i>albicaulis</i>	white-stemmed clarkia	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Chaparral, cismontane woodland. Dry, grassy openings in chaparral or foothill woodland. Sometimes on serpentine. 245-1085 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Clarkia mildrediae</i> ssp. <i>lutescens</i>	golden-anthered clarkia	-/-/4.2		Cismontane woodland, lower montane coniferous forest. Often in roadcuts. Rocky sites. 275-1750 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Clarkia mildrediae</i> ssp. <i>mildrediae</i>	Mildred's clarkia	-/-/1B.3	BLM_S-Sensitive USFS_S-Sensitive	Cismontane woodland, lower montane coniferous forest. On decomposed granite; sometimes on roadsides. 245-1710 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Clarkia mosquinii</i>	Mosquin's clarkia	-/-/1B.1	BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	Cismontane woodland, lower montane coniferous forest. Usually on steep, rocky cutbanks and slopes. 185-1220 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed

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						during botanical surveys in the ESL in 2015.
<i>Claytonia parviflora</i> ssp. <i>grandiflora</i>	streambank spring beauty	-/-/4.2		Cismontane woodland. Pine/blue oak woodlands in the Sierra foothills. 250-1200 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Cypripedium californicum</i>	California lady's-slipper	-/-/4.2		Lower montane coniferous forest, bogs and fens. In perennial seepages on serpentine substrate and in gravel along creek margins. 30-2750 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Cypripedium fasciculatum</i>	clustered lady's-slipper	-/-/4.2	BLM_S-Sensitive USFS_S-Sensitive	North Coast coniferous forest, lower montane coniferous forest. In serpentine seeps and moist streambanks. 100-2435 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Drosera anglica</i>	English sundew	-/-/2B.3		Bogs and fens, meadows. 1300-2000 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Eleocharis torticulmis</i>	California twisted spikerush	-/-/1B.3	USFS_S-Sensitive	Bogs and fens, meadows and seeps, lower montane coniferous forest. 1005-1175m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Eremogone cliftonii</i>	Clifton's eremogone	-/-/1B.3	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, chaparral. Openings; granitic substrates. 445-1770 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed

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						during botanical surveys in the ESL in 2015.
<i>Erigeron petrophilus</i> var. <i>sierrensis</i>	northern Sierra daisy	-/-/4.3		Lower montane coniferous forest, upper montane coniferous forest, cismontane woodland. Rocky foothills to montane forest, sometimes on serpentine. 300-2075 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Eriogonum umbellatum</i> var. <i>ahartii</i>	Ahart's buckwheat	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Cismontane woodland. Serpentinite. On slopes, in openings. 400-2000 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Eriophorum gracile</i>	slender cottongrass	-/-/4.3		Bogs and fens, meadows and seeps, upper montane coniferous forest. Acidic soils. 1280-2900 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Fritillaria eastwoodiae</i>	Butte County fritillary	-/-/3.2	USFS_S-Sensitive	Chaparral, cismontane woodland, lower montane coniferous forest. Usually on dry slopes but also found in wet places; soils can be serpentine, red clay, or sandy loam. 50-1500 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Ivesia webberi</i>	Webber's ivesia	FT/-/1B.1	BLM_S-Sensitive USFS_S-Sensitive	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Rocky, volcanic soils. 1000-2075 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.

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<i>Lewisia cantelovii</i>	Cantelow's lewisia	-/-1B.2	BLM_S-Sensitive USFS_S-Sensitive	Broad-leaved upland forest, lower montane coniferous forest, cismontane woodland, chaparral. Mesic rock outcrops and wet cliffs, usually in moss or clubmoss; on granitics or sometimes on serpentine. 330-1370 m.	Yes	Present. Individuals of this taxon were observed during botanical surveys in the ESL.
<i>Lilium humboldtii</i> ssp. <i>humboldtii</i>	Humboldt lily	-/-4.2		Chaparral, lower montane coniferous forest, cismontane woodland. Yellow-pine forest, openings or open forest. 90-1280 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Lupinus dalesiae</i>	Quincy lupine	-/-4.2		Chaparral, cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. Dry open or shaded slopes, summits, and trails. Plants often found in disturbed soils. 855-2500 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Meesia triquetra</i>	three-ranked hump moss	-/-4.2		Bogs and fens, meadows and seeps, upper montane coniferous forest, subalpine coniferous forest. Moss growing on mesic soil. Saturated bogs, fens, seeps and meadows in coniferous to subalpine forests. 1300-2955 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Meesia uliginosa</i>	broad-nerved hump moss	-/-2B.2	USFS_S-Sensitive	Meadows and seeps, bogs and fens, upper montane coniferous forest, subalpine coniferous forest. Moss on damp soil. Often found on the edge of fens or raised above the fen on hummocks/shrub bases. 1210-2805 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Mimulus glaucescens</i>	shield-bracted monkeyflower	-/-4.3		Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Wet places, often in rock crevices, and in serpentine seeps. 60-1240 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.

Scientific Name	Common Name	Fed/ State/ CNPS Status ¹	Other Status	Habitat	Habitat Present?	Potential for Occurrence & Rationale
<i>Mimulus inconspicuus</i>	small-flowered monkeyflower	-/-/4.3		Cismontane woodland, lower montane coniferous forest, chaparral. Moist or shaded places. 275-760 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Mimulus laciniatus</i>	cut-leaved monkeyflower	-/-/4.3		Lower montane coniferous forest, upper montane coniferous forest, chaparral. Decomposed granite, wet sandy places. 490-2650 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Monardella follettii</i>	Follett's monardella	-/-/1B.2	USFS_S-Sensitive	Lower montane coniferous forest. Open rocky serpentine slopes. 600-2000 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Oreostemma elatum</i>	tall alpine-aster	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Bogs and fens, meadows and seeps, upper montane coniferous forest. Mesic sites. 1005-2100 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Packera eurycephala</i> var. <i>lewisrosei</i>	Lewis Rose's ragwort	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Cismontane woodland, lower montane coniferous forest, chaparral. Steep slopes and in canyons in serpentine soil, often along or near roads. 275-1890 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Penstemon personatus</i>	closed-throated beardtongue	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, and chaparral. Usually on N-facing slopes in metavolcanic soils. 1065-2120 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.

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<i>Perideridia bacigalupii</i>	Bacigalupi's yampah	-/-/4.2		Chaparral, lower montane coniferous forest. Steep rocky banks or slopes on serpentine. 450-1035 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Poa sierrae</i>	Sierra blue grass	-/-/1B.3	USFS_S-Sensitive	Lower montane coniferous forest. Shady, moist, rocky slopes. Often in canyons. 365-1500 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Polystichum lonchitis</i>	northern holly fern	-/-/3		Subalpine coniferous forest, upper montane coniferous forest. Moist shady crevices in granite or carbonate cliffs. 1800-2600 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Potamogeton epihydrus</i>	Nuttall's ribbon-leaved pondweed	-/-/2B.2		Marshes and swamps. Shallow water, ponds, lakes, streams, irrigation ditches. 370-2170 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Potamogeton robbinsii</i>	Robbins' pondweed	-/-/2B.3		Marshes and swamps. Deep water, lakes. 1530-3300 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Rhynchospora alba</i>	white beaked-rush	-/-/2B.2		Bogs and fens, meadows and seeps, marshes and swamps. Freshwater marshes and sphagnum bogs. 60-2040 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.

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<i>Rhynchospora capitellata</i>	brownish beaked-rush	-/-/2B.2		Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. Mesic sites. 45-2000 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	-/-/1B.2	BLM_S-Sensitive	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-650 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Sedum albomarginatum</i>	Feather River stonecrop	-/-/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Chaparral, lower montane coniferous forest. In crevices and on ledges of serpentine outcrops and slopes. 260-1950 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Sidalcea gigantea</i>	giant checkerbloom	-/-/4.3		Lower montane coniferous forest, upper montane coniferous forest, meadows and seeps. Moist areas, such as in meadows or at the edges of wet meadows, along creeks, or at seeps and springs. 670-1950 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Sparganium natans</i>	small bur-reed	-/-/4.3		Marshes and swamps, bogs and fens. Lake and pond margins. 1645-2500 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Stellaria obtusa</i>	obtuse starwort	-/-/4.3		Upper montane coniferous forest, lower montane coniferous forest, riparian woodland. Stream- or seep-side in conifer forest. 150-2135 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.

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<i>Streptanthus longisiliquus</i>	long-fruit jewelflower	-/-/4.3		Lower montane coniferous forest, cismontane woodland. Openings. 715-1500 m.	Yes	Not Present. Although suitable habitat is present in the ESL, no individuals of this taxon were observed during botanical surveys in the ESL in 2015.
<i>Utricularia intermedia</i>	flat-leaved bladderwort	-/-/2B.2		Bogs and fens, meadows and seeps, marshes and swamps, vernal pools. Mesic meadows, lake margins, marshes, fens. 1200-2700 m.	No	Not Present. Suitable habitat is not present in the ESL and no individuals of this taxon were observed during botanical surveys in the ESL in 2015.

VEGETATION COMMUNITIES

<i>Darlingtonia Seep</i>	Darlingtonia Seep	-/-/-			-	Not Present. No Darlingtonia seeps were observed in the ESL during project surveys.
<i>Sphagnum Bog</i>	Sphagnum Bog	-/-/-			-	Not Present. No sphagnum bogs were observed in the ESL during project surveys.

¹**Abbreviations**

C-Candidate, E-Endangered, F-Federal, S-State, P-Proposed, T-Threatened.

CNPS Ranks: 1B- rare, threatened, or endangered in CA and elsewhere; 2B- rare, threatened, or endangered in CA but more common elsewhere; 3- more information needed;

4- Plants of limited distribution; 0.1- seriously threatened in CA; 0.2- moderately threatened in CA; 0.3- not very threatened in CA.

BLM-Bureau of Land Management, CDFW-California Department of Fish and Wildlife, USFS-United States Forest Service, IUCN-International Union for Conservation of Nature, WBWG-Western Bat Working Group

ft-feet, m-meters