

Plumas 70 Permanent Restoration

Plumas County, California

District 2-PLU-70-PM 0.00/29.9

EA: 02-4H440/EFIS: 02-1800-0119

Initial Study with Proposed Negative Declaration/ Environmental Assessment



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016 and executed by the Federal Highway Administration (FHWA) and Caltrans.

February 2020



General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of alternatives being considered for the proposed project in Plumas County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Additionally, Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- ☐ Please read the document.
- ☐ Additional copies of the document and the related technical studies are available for review at:
 - Caltrans District 2, 1657 Riverside Drive, Redding, CA 96001
 - Plumas County Library, Quincy Branch, 445 Jackson Street, Quincy, CA 95974
- ☐ Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Emiliano Pro, California Department of Transportation, District 2, North Region Environmental Management, 1657 Riverside Drive (MS-30), Redding, CA 96001. Submit comments via email to: emiliano.pro@dot.ca.gov.
- ☐ Submit comments by the deadline: April 3rd , 2020.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration (FHWA), may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

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Plumas 70 Permanent Restoration in the Feather River Canyon
State Route 70, In Plumas County at various locations from Butte County Line to 3.1 miles
west of Route 89

INITIAL STUDY with Proposed Negative Declaration/ ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA

Department of Transportation

Cooperating Agencies: U.S. Forest Service (Plumas National Forest)

Responsible Agencies: California Transportation Commission, Central Valley Regional Water
Quality Control Board, State Office of Historic Preservation

Trustee Agencies: California Department of Fish and Wildlife

2/14/20
Date


Wesley Stroud
Office Chief, North Region Environmental
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Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans), using both state and federal funds, is proposing a permanent restoration project to repair storm-related damage to SR 70 at multiple locations (from post mile 0.00 to 29.9) in Plumas County. Existing conditions and roadway features are not in a good state of repair, and Caltrans risks losing the roadway if work is not completed. Proposed work consists of three engineering features: partially grout rock slope protection, build tie back retaining wall, and replace culverts. Work would require vegetation clearing along the banks of the North Fork Feather River and five of its associated unnamed tributaries/drainages. SR 70 in this section of the Feather River Canyon is designated as a Scenic Byway within the Plumas National Forest, and work would be context-sensitive. The project would require the following permits; California Department of Fish and Wildlife 1602 permit, Central Valley Regional Water Quality Control Board 401 Certification, and a U.S. Army Corps of Engineers 404 Nationwide Permit.

Determination

This proposed Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Negative Declaration for this project. This does not mean that Caltrans' decision on the project is final. This Negative Declaration is subject to change based on comments received from 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 effect on the environment for the following reasons.

The project would have no impact on Agriculture and Forest resources, Energy, Geology and Soils, Land Use and Planning, Mineral Resources, Population and Housing, and Tribal Cultural Resources.

The project would have less than significant impact on Aesthetics, Air Quality, Biological Resources, Cultural Resources, Greenhouse Gas Emissions, Hazards and Hazardous Waste, Hydrology and Water Quality, Noise, Public Services, Recreation, Transportation, Utilities and Service Systems, and Wildfire.

Wesley Stroud
Office Chief, North Region Environmental
District 2
California Department of Transportation

Date

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Chapter 1 Proposed Project

1.1 Introduction

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 United States Code 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 United States Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 United States Code 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016 for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 United States Code 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

The Department, as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study with Mitigated Negative Declaration/Environmental Assessment for the proposed project located in Plumas County, California. The Department is the lead agency under the National Environmental Policy Act (NEPA). The Department is the lead agency under the California Environmental Quality Act (CEQA). The Department proposes to repair storm-damaged facilities within the Feather River canyon, adjacent to the North Fork Feather River, on State Route (SR) 70. The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

1.2 Purpose and Need

1.2.1 Purpose

To permanently restore and replace the storm-damaged highway protective features to prevent route closure and future damage to the state highway.

1.2.2 Need

The Feather River within the Feather River Canyon is prone to high, rapid flows. During a period of heavy precipitation in February 2017, the roadway flooded in several locations which caused extensive damage to the roadway and embankments. This damage was temporarily repaired under an Emergency Opening contract. Additional work is still required to create a more permanent solution. There is no readily available detour for this route.

1.3 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. The alternatives are Alternative A (Build Alternative) and Alternative B (the No-Build Alternative).

Existing Facility

State Route 70 within the Feather River Canyon experienced heavy rainfall and associated storm damage in winter 2017. Despite some emergency repairs, damage still exists throughout the facility. This damage primarily exists on the embankment between the North Fork Feather River and State Route 70. Damage includes, scour of rock slope protection, damage of existing culverts, and failure at the toe of the grouted Rock Slope Protection embankment at approximately postmile 20. State Route 70 is a 2-lane highway that follows the course of the Feather River within the Feather River Canyon.

1.3.1 Alternative A – Build Alternative

The California Department of Transportation (Caltrans), using both state and federal funds, is proposing a permanent restoration project to repair storm-related damage to SR 70 at multiple locations (from PM 0.00 to 29.9) in Plumas county. SR 70 in this section of the Feather River Canyon is designated as a scenic byway within the Plumas National Forest, and work would be context-sensitive. Proposed work consists of three engineering features: partially grout rock slope protection, build tie back retaining wall, and replace culverts. This proposed project would be completed using state and federal funds.

The project limits contain ten main areas where permanent restoration improvements are proposed, and one location for equipment staging along SR 70.

Partially Grout Rock Slope Protection

Under Alternative A, Caltrans would place grout and existing rock slope protection above the Ordinary High Water Mark. This would cement existing rocks together and effectively form much larger rock slope protection. This allows for a flexible, responsive rock slope protection with an effective particle weight of 8 to 16 tons. Where feasible, voids would be vegetated to create bio-engineered rock slope protection. Rock slope protection would be placed with a large excavator and thumb attachment and grout would be placed with a hand-held nozzle operator. This scope of work would occur at the following nine locations:

- Location 1: PLU 70 PM 0.06-0.14. Partially grout approximately 530 ft by 58 ft by 6 ft of 4-ton rock slope protection.
- Location 2: PLU 70 PM 3.44-3.79. Partially grout approximately 1510 ft by 20 ft by 3 ft of 4-ton rock slope protection.
- Location 3: PLU 70 PM 4.34-4.46. Partially grout approximately 900 ft by 25 ft by 5 ft of 4-ton rock slope protection.
- Location 4: PLU 70 PM 4.54-4.62. Partially grout approximately 900 ft by 25 ft by 5 ft of 4-ton rock slope protection.
- Location 5: PLU 70 PM 5.21-5.48. Partially grout approximately 1400 ft by 30 ft by 6 ft of 2-ton rock slope protection.
- Location 6: PLU 70 PM 8.68-8.76. Partially grout approximately 425 ft by 3 ft by 3 ft of 1/4-ton rock slope protection.
- Location 7: PLU 70 PM 10.00-10.01. Partially grout approximately 50 ft by 3 ft by 3 ft of 1/2-ton rock slope protection.
- Location 8: PLU 70 PM 16.69-16.75. Partially grout approximately 100 ft by 4 ft by 2 ft of 1/2-ton rock slope protection.
- Location 10: PLU 70 PM 29.76-29.87. Partially grout approximately 566 ft by 20 ft by 3 ft of 4-ton rock slope protection.

The limits of grouted rock slope protection do not necessarily indicate that the entire section will be grouted into clusters. Clusters will be created where the embankment needs to be repaired. Where native riparian vegetation is established and has already stabilized the embankment, no work will be completed. The contractor will be required to contain the grout and prevent any pollution from entering nearby waters, especially the North Fork Feather River.

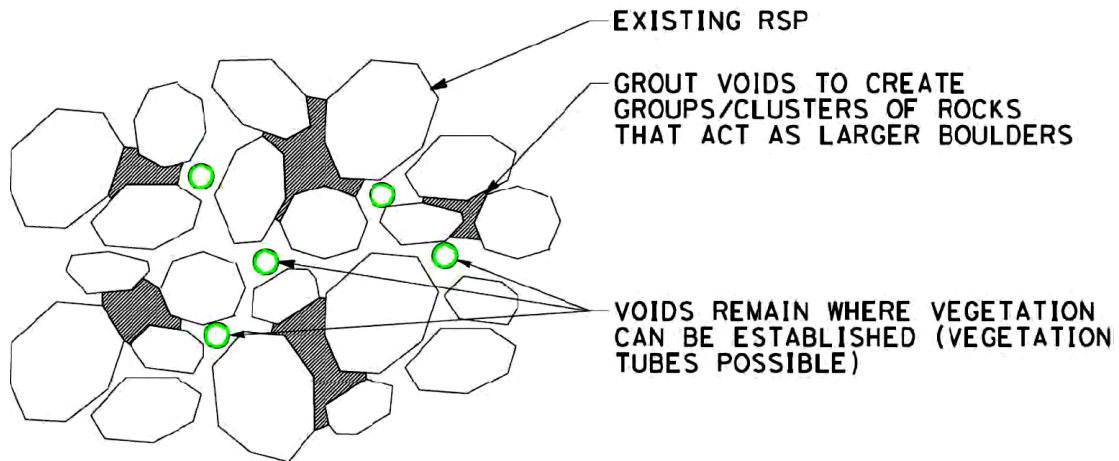


Figure 1. Plant Tubes Within Grouted Rock Slope Protection

Tie Back Retaining Wall (Location 9)

Under Alternative A, Caltrans would repair approximately 1,800 feet of undermined concreted rock slope protection at PM 20.58-20.93. At this location, the curvature of the river causes water to move at a higher velocity and erode material at a greater rate. This has caused the “toe” of the rock slope protection embankment in this section of the highway to fail, creating a large scour hole and potential for the remainder of the embankment to fail. Failure would cause material to fall into the river, de-stabilize the roadway, and Caltrans would likely have to close the highway facility until reconstruction could be completed.

The scope of work at this location is to construct a tie back wall from the top of the roadway (see figure 2 below). The construction sequence would begin with the drilling of 30- to 36-inch diameter holes and installing H-piles 8-10 feet apart with lengths ranging from 35-65 feet and backfilling them with concrete. Once the piles are placed, excavation of the existing embankment to construct the wall face will begin, and concrete lagging will be placed between the H-piles as the excavation continues. The excavation will occur along the entire top length of the existing concreted rock slope protection section of the existing embankment, approximately 15-20 feet from the hinge point down to a depth of approximately 25 feet. The excavation will create a bench area (flat access road cut into the existing embankment) where further work can be conducted and where equipment can be staged off the roadway. The tie back wall would be tapered at both ends to the embankment. Tiebacks would be incorporated to properly anchor the concrete lagging. Once the concrete lagging has been placed, a horizontal concrete beam (waler) would be installed to support the ground anchors. These anchors would be grouted into place at an interval of 8-10 feet apart. Then, the bench area would receive erosion control improvements and landscaping consistent with the needs for the Feather River Corridor. No work is proposed below the Ordinary High Water Mark or in the river bed of the Feather River. The contractor will be required to contain all excavation and construction debris within the wall excavation limits and collect all existing concreted rock slope protection removed from the embankment.

Containment will be maintained along the entire wall construction to catch debris and prevent it from entering the Feather River. Prior to the employment of the catchment device, the contractor shall prepare and submit an Excavation Plan for review and approval by Caltrans. This plan shall include the contractor's strategy for safe containment of the excavated material

Once the wall is complete, a new four-foot wide shoulder would be paved and metal beam guardrail would installed along the length of the wall. A new asphalt dike would be placed under the new MBGR. The highway would receive a new overlay of pavement and new striping.



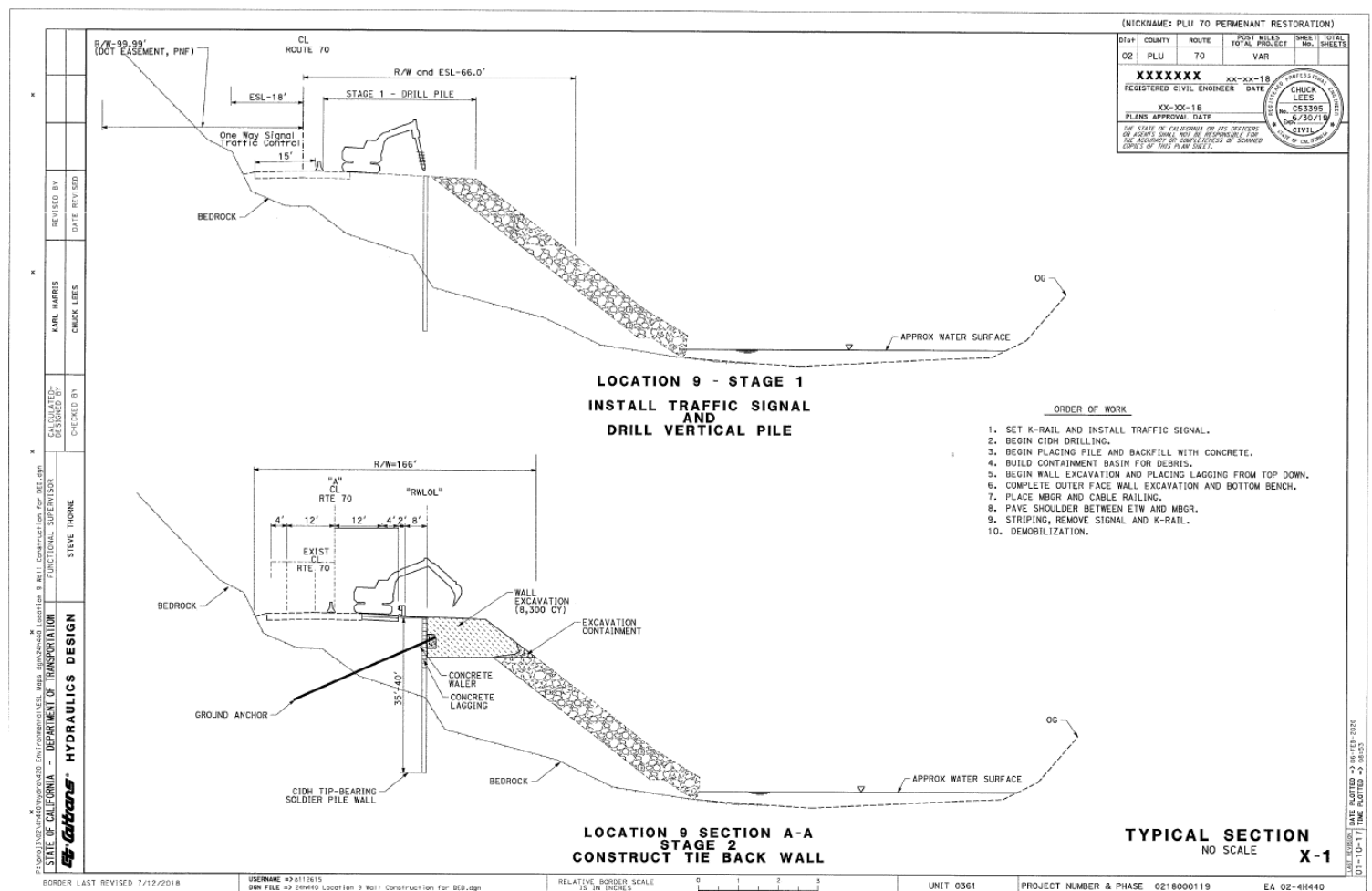


Figure 2. Preliminary Design of Tie Back Retaining Wall Construction



Drainage Repair

The flowing culverts have been identified as structurally deficient and undersize. Work will consist of replacing and upsizing the culverts and replacing the end treatments.

Table 1. Proposed Work at Each Culvert Location

No.	PM	Existing Diameter (inches)	New Diameter (inches)	Existing Length (feet)	New Length (feet)	Proposed Work
1	20.58	18	24	55	55	Replace culvert and inlet.
2	20.67	18	24	59	59	Replace culvert and inlet.
3	20.75	18	24	60	60	Replace culvert and inlet.
4	20.80	12	12	58	58	Replace culvert and inlet.
5	20.82	24	30	67	67	Replace culvert and inlet.
6	20.85	18	24	57	57	Replace culvert and inlet.
7	20.93	30	30	74	74	Replace culvert and inlet.



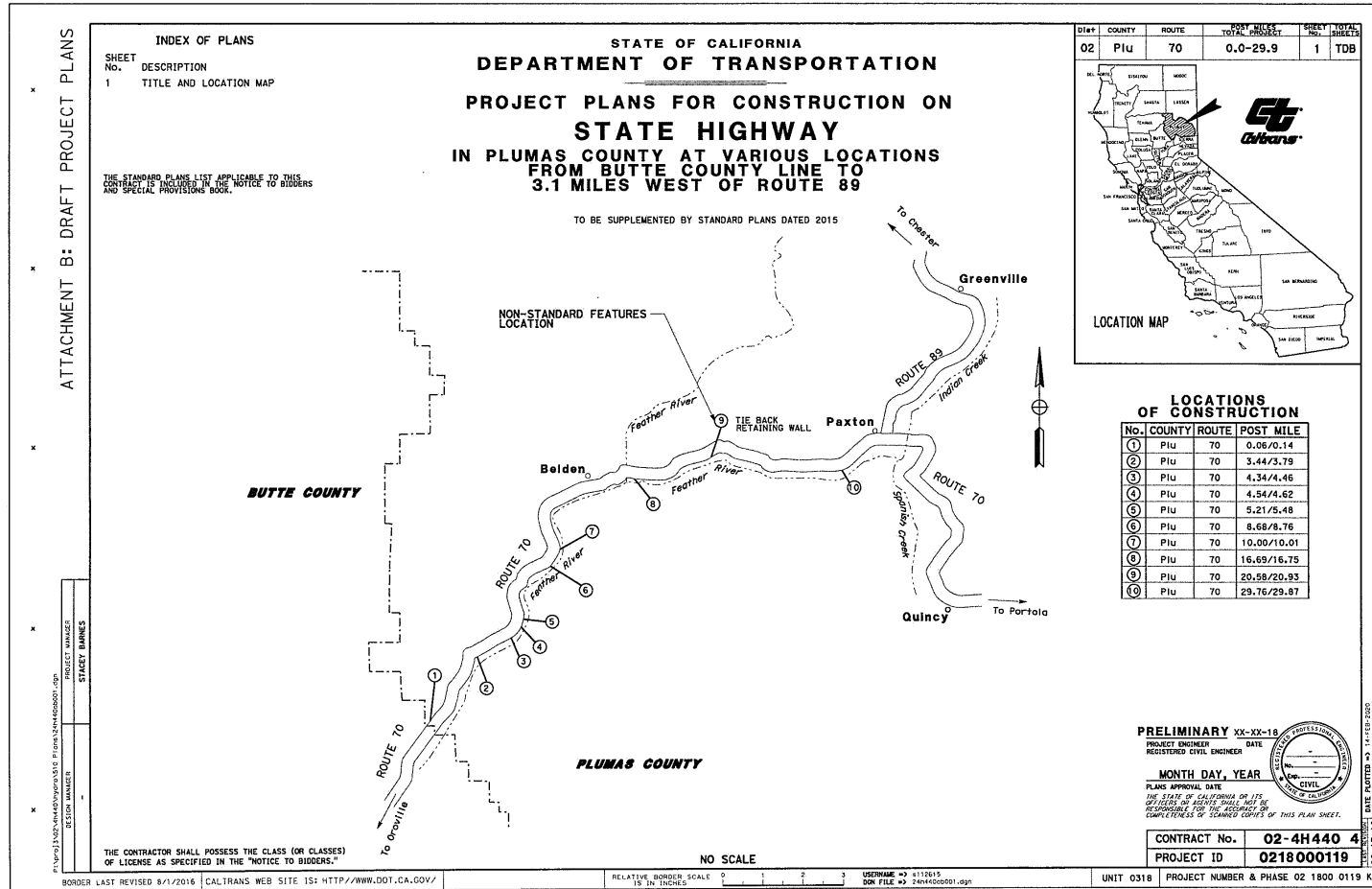


Figure 3. Project Vicinity Map



1.3.2 No-Build (No-Action) Alternative

The No-Build alternative would not make permanent restoration upgrades or repair damage to highway protective features along SR 70.

The existing conditions within the project areas include eroded roadway embankment material and failure of highway protective concreted rock slope protection. Essentially, there are voids in the embankment between the highway and the river. These voids can create instability of the embankment and could lead to the failure of the highway facility if not addressed.

The Feather River is susceptible to high and frequent flood events due to the steep and narrow river canyon and frequency of “rain on snow” events. The existing highway embankments are exposed to high scour velocities and large boulder movements during peak river flow events. Storm Damage and Emergency Contract records show that storm damage is a recurring issue in the Feather River Canyon and most of the project locations. The storm that caused this damage in February 2017 was approximately a 25-year flow.

Based on this historical data and other recent evidence of climate change, more significant storms and flooding can be anticipated in the future.

1.4 Comparison of Alternatives

When conducting the comparison analysis, the criteria used for evaluating the alternatives was based on the urgent need to provide a safe transportation facility and permanently restore the roadway embankment damaged as a result of the 2017 storm damage. Caltrans staff evaluated potential alternatives based on whether the alternative addressed the project’s purpose and need, the overall cost versus benefit of the alternative, the time required to complete the project development process in consideration of the urgent immediate to repair the roadway embankment features, and the alternative’s impact to environmental resources.

The proposed project offers long-term, environmentally sensitive solutions to the purpose and need identified during project initiation. Where grouting is proposed, vegetation removal will be minimal and generally consist of Himalayan blackberry, an invasive species. Native vegetation (willow and dogwood) will be replanted in the voids of the grouted rock slope protection to facilitate the armoring of the bank, reduce the velocity of flowing water, and look more natural in the context of the Feather River Canyon. By constructing a tie back retaining wall, Caltrans will allow the river to reclaim a large portion of its natural channel width. This is achieved because the rock slope protection embankment will be reduced in size due to construction of the access bench. During high flows, the channel will be able to accommodate a higher volume of water, while simultaneously routing flows at a slower velocity.

There would not be any environmental related impacts associated with the no-build alternative relative to the proposed project. However, not making repairs to the highway protective features leaves State Route 70 vulnerable to additional storm damage and could result in the ultimate failure of the roadway and costly emergency operations along this route. Failure would be socially and economically damaging and would also create a safety issue for the traveling public and nearby residents. Additionally, this alternative does not meet the purpose and need. There is not a readily available detour through the Feather River Canyon.

After comparing and weighing the benefits and impacts of the project alternatives, the Project Development Team has Identified Alternative A as the preferred alternative, subject to public review. Final identification of a preferred alternative will occur after the public review and comment period.

After the public circulation period, all comments will be considered. Caltrans will make the final determinations of the project's effect on the environment. Under CEQA, if no unmitigable significant impacts are identified as a result of the proposed project, Caltrans will prepare a Negative Declaration (ND) or Mitigated Negative Declaration (MND). Similarly, if Caltrans determined the proposed action does not result in significant adverse effects on the environment, Caltrans will prepare a Finding of No Significant Impact (FONSI) in accordance with NEPA and the Memorandum of Understanding with FHWA.

1.5 Alternatives Considered but Eliminated from Further Discussion

Following the project initiation phase of project development, an alternative solution to repair the undermined rock slope protection embankment at location 9 was considered but eliminated from further discussion. The work associated with this repair would require construction equipment access into the bed of the North Fork Feather River, construction of a cofferdam along the undermined section of the embankment, dewatering of approximately 1800 linear feet of the North Fork Feather River's channel, and backfill of the undermined section with boulders/ rock slope protection material. Caltrans has determined this alternative to have substantial environmental impacts to biological, water quality, floodplain, and traffic resources. As such, this alternative was eliminated from further consideration.

1.6 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction:

Table 2. Permits and Approvals Needed

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	1602 – Lake and Streambed Alteration Agree	Not Submitted
Central Valley Regional Water Quality Control Board	401 – Clean Water Certification	Not Submitted
United States army Corps of Engineers	404 – Nationwide Dredge and Fill Certification	Not Obtained



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

TOPICS CONSIDER BUT DETERMINED NOT TO BE RELEVANT

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

- **Farmlands** – Important farmland maps of areas surrounding the project limits are listed as non-agricultural or natural vegetation, and the proposed project is not within farmland (i.e. areas that include Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and properties in Williamson Act contract) (California Department of Conservation, 2016). No impacts to important farmland will occur as a result of the project.
- **Timberlands** – The various project locations all fall within Plumas county and are therefore subjected to the Plumas County General Plan land use designation. According to the Plumas County General Plan map, all project locations fall within assessor parcel numbers (APN) that are designated as General Forest (GF) or Timberland Production (TPZ) (Plumas County, 2016). This land use designation and zoning allows forest management and the harvesting/processing of forest products. The project will not expand the highway facility, will not result in harvest of timber trees, and will not impact forest roads. Therefore, impacts to forest resources will not occur as a result of the project. This minimal tree removal associated with roadway and drainage improvements would not conflict with the existing zoning and would not impact the overall abundant timber resources in the surrounding area. A conversion of timber designations and zones would not occur as part of the project, resulting in no impact to Forest Resources.
- **Coastal Zone** – The project is not within the coastal zone and would not result in impacts to coastal resources.
- **Energy** – The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation nor would it conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- **Growth** – The geographic location of the project is not conducive to large scale residential or commercial growth due to the rugged terrain surrounding the work areas. Additionally, the project will not expand the currently existing roadway prism. This land is not zoned for development. The project would not provide new access to undeveloped areas and project area lacks the necessary infrastructure to support growth. Overall, the project would not induce growth and therefore would not result in growth and therefore would not result in growth-related impacts.
- **Community Character and Cohesion** – The proposed project would result in permanent restoration of SR 70 within the project limits. The proposed improvements

would be considered beneficial for the travelling public. Upon completion, the proposed project would not alter or disrupt community character and cohesion in the surrounding area and would provide safer pedestrian and bike access along SR 70 due to proposed road shoulder widening. The proposed project would not physically divide an established community. The project is located within rural Plumas County and lacks any large towns or cities. No impacts are anticipated.

- **Consistency with State, Regional, and Local Plans and Programs** – Relevant State, regional, and local plans have been considered to determine consistency of the project with the goals of the plans. The project does not conflict with any State, regional, or local plans. The project would have no impact with regard to this resource.
- **Population and Housing / Community Impacts**- Plumas County population in 2018 was estimated at 18,804 (U.S. Census Bureau, 2018). Populated areas along SR 70 and the North Fork Feather River are characterized as sparse and scattered, with small residential communities including Paxton, Twain, French Bar, Belden, Rogers Flat, Tobin, Rock Creek, and Storrie. Population within the vicinity of the proposed project is sparse. A few residences are located within the vicinity of project areas 5 and 8 and are associated with the Storrie Retreat and Belden, respectively. There are no residences located in project areas 1, 2, 3, 4, 6, 7, 9 and 10. The proposed project consists of permanently restoring SR 70 within the project limits, and there would be no impact related to population growth, or displacement of housing or people.

Environmental Justice – This project is in a rural area. All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have been incorporated throughout the development of the project. No minority or low-income populations that would be adversely affected by the proposed project have been identified as determined above. Therefore, this project is not subject to the provisions of Executive Order 12898.

- **Geology/Soils/Seismic/Topography** - This is a permanent restoration project with no potential for adverse impacts to the geology, soils, and topography of the project area. All project activities will occur within previously disturbed ground within State lands. The project would not directly or indirectly cause potential adverse effects including rupture of known faults, seismic shaking, seismic-related ground failure, or landslides. Soils within the project area have been considered and determined to be suitable for project activities.
- **Paleontology** – Based on previous environmental studies and construction projects in the area, there is no potential for adverse impacts to paleontological resources. All project work will occur within the roadway prism. This area has been previously disturbed numerous times during the creation and maintenance of SR 70.
- **Land Use and Planning** – Proposed project construction is confined to the existing maintained Caltrans Right of Way. The proposed project would not result in land use change. Plumas County land use designations for all project areas is General Forest and Timberland Production. Location 5 is adjacent to designated Resort and Recreational (RR) and location 9 is adjacent to Secondary Suburban Residential (SSR). While near these designated areas, the proposed project consists of the restoration of highway protective features; there is no conflict with regard to any applicable land use plan, policy, and or regulation of an agency with jurisdiction over the project. There are no habitat conservation plans and/or natural community conservation plans that apply to the project site. Relevant State, regional, and local plans have been considered to determine consistency of the project with the goals of the plans. The project does not conflict with any State, regional, or local plans. The project would have no impact with regard to land use and planning.

- **Mineral Resources** - Plumas County has 16,902 records of mining claims on public land, with 1,197 active claims (Diggings, 2019). The Plumas County General Plan identifies prime mining resource production areas and advises that these locations occur where surrounding land use and environmental setting will permit extraction without major adverse environmental impacts. Permits are issued on a case by case administrative review (Plumas County, 1984). Although there is evidence of historic and active mining activities near all project areas, project activities occur within the roadway facility that has already been disturbed and impacts to mineral resources are not anticipated. Proposed drainage conveyance improvements under SR 70 and roadway protective features will not result in the loss of known available mineral resources or mineral recovery sites, as a majority of the project related impacts occur within the existing roadway structure.
- **Tribal Cultural Resources** - Per the requirements of Assembly Bill (AB) 52, on May 12th, 2015 and again on March 16th, 2016, Caltrans distributed letters with a description and location of the proposed project to Native American tribes within the vicinity of the proposed project that are listed with the National American Heritage Commission (NAHC). Consultation with federally recognized tribes, local Native American communities, and interested parties was initiated in accordance with. To date no comments have been received by the USFS or Caltrans. No impacts are anticipated.
- **Relocations and Real Property Acquisition** – There will not be any Relocations or Real Property Acquisitions as part of the proposed project.
- **Utilities / Emergency Systems** - Domestic water supply for rural residences in the vicinity of the project limits is provided by groundwater wells. Wastewater disposal systems are predominately septic. Electricity is provided by Pacific Gas and Electric (PG&E), with various propane/gas providers also serving the area. Caltrans would not relocate any utility alignments along SR 70. Provisions will be made during construction to minimize traffic delays and to allow access and passage of emergency vehicles. The proposed project consists permanent restoration SR 70 within the project limits, and there would be no impact related to utilities and service systems.
- **Wild and Scenic Rivers** - The proposed project is confined to the existing Caltrans ROW and is not adjacent to any Wild and/or Scenic Rivers. The nearest Wild and Scenic River is the Middle Fork Feather River, which is greater than 10 miles south of the project areas. Therefore, the project would have no impact to Wild and Scenic Rivers
- **Mandatory Findings of Significance** - The proposed project would not result in adverse effects to environmental resources and does not have the potential to degrade the quality of the environment. The proposed project consists of the permanently restoring existing roadway facility, and there would be no significant impacts related to mandatory findings of significance. The proposed project would impact a minimal amount of wildlife habitat, and potential impacts to fish and wildlife species potentially occurring in the vicinity of the proposed project have been reduced with the implementation of avoidance, minimization, and project design. The proposed project would not result in any adverse effects that, when considered in connection with other projects, would be considered cumulatively considerable. Based on the description of the proposed project and consideration of potential effects, there is no evidence to support a finding that the project would have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

2.1 Human Environment

2.1.1 Parks and Recreational Facilities

Regulatory Setting

The Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

There are no developed parks or recreation sites (campgrounds and trailheads) or developed boating/rafting access locations within the Project Limits, however the project area is located within the Plumas National Forest. Dispersed recreation occurs within the proposed project area along the North Fork Feather River (fishing, panning for gold, swimming, rafting/boating) and State Route 70 (driving for pleasure, biking, picnicking and hiking). The majority of recreational activities that occur within the vicinity of the project area are concentrated along the North Fork Feather River and State Route 70. All project areas occur within the existing Caltrans right-of-way, and designated recreation within these work areas is not available.

In addition, State Route 70 is designated as the Feather River Scenic Byway, a National Forest Scenic Byway, within the project location.

Environmental Consequences

Alternative A – Proposed Action

Permanent restoration work under Alternative A may result in minor short-term impacts on dispersed recreation activities occurring along SR 70 and the North Fork Feather River, by causing minor inconveniences to visitors if contractors and/or equipment are utilizing roadway pullouts or blocking stream banks or undeveloped trail access. A visitor would have to select an alternate recreation site to avoid an area where active construction is occurring. This impact is short-term in nature since proposed work would only occur over one season. Access to the North Fork Feather River could be made from other locations along SR 70, and the proposed project would not be blocking or limiting any known developed recreational sites. Visitors looking to utilize roadside pullouts for picnicking, scenery, etc. would have to choose pullouts outside of the active work area or utilize existing SR 70 rest areas. Provisions will be made during construction to minimize traffic delays and to allow timely passage of visitors utilizing the Feather River Scenic Byway and Plumas National Forest.

Recreation opportunities would be maintained or improved under the proposed action by providing a safer highway facility that is resistant to storm related damage and subsequent closure. No adverse impacts are anticipated upon project completion. Construction is proposed for one dry weather season. This work will

occur within the Caltrans right-of-way, and public utilization of these areas for recreation is not anticipated. Special considerations including aesthetic treatment to the proposed tie back retaining wall and reduction of traffic delays have been made to limit construction and project impacts to recreational opportunities provided within the Feather River corridor. The project would not result in a “use” of any recreational 4(f) resources. Designated recreational resources would not be impacted by the scope of work.

Alternative B – No Action

Permanent restoration work would not be made under Alternative B. There would not be any impacts on dispersed recreation activities occurring along SR 70 and the North Fork Feather River.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would implement the following standard measures to preserve recreation opportunities to the traveling public:

- Pedestrian and bicycle access along SR 70 would be maintained during construction.
- The contractor would be required to minimize any access delays to driveways or public roadways within or near the work zones.

2.1.2 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

Caltrans, as assigned by U.S. Federal Highways Administration, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally-assisted programs is governed by the U.S. Department of Transportation regulations (49 Code of Federal Regulations Part 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [United States Code] 794). Federal Highways Administration has enacted regulations for the implementation of the 1990 Americans with Disabilities Act, including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the Americans with Disabilities Act requirements to federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

A Traffic Management Plan was prepared by Caltrans District 2 staff in October of 2019. The Traffic Management Plan analyzed State Route 70 from the Caltrans Pulga Maintenance Station in Butte County to the Junction of State Route 70 and State Route 89. This study area was chosen because it encapsulates the entire project area, including areas that have the potential to be directly or indirectly impacted by the proposed project.

Traffic and Transportation

State Route 70 accommodates regional, interregional, recreational, and commercial truck traffic, in addition to serving local traffic within Quincy, Oroville, and numerous unincorporated communities. State Route 70 is a 2-lane convention highway that serves as the primary route between the community of Quincy and the Junction of SR 70/US 395. There is one 12-foot paved lane with approximately 0-2-foot paved shoulder in each direction at the project locations. This National Forest Scenic Byway route features natural diversity in terrain, landscape, wildlife and elevation, while highlighting historic anthropogenic features including hydroelectric power, railroad and highway construction along the steep, rugged canyon walls. Caltrans currently maintains the right-of-way within 166 feet. of the centerline of State Route 70. The regulatory speed limit is 55 MPH.

Traffic Volume

Table 3. 2017 Annual Average Daily Traffic (AADT) Volumes for Both Directions

Description	County-Route-Reference Post Mile (Leg)	Vehicle AADT Total	Truck Percent of Total Vehicles
Butte/Plumas County Line	Plu-70-0.00	1,200	10.12
Junction of Route 70 and 89 North	Plu-70-33.026	1,400	10.15

Table 4. 2016 TSN Volumes for Project Traffic Delay

Description	Peak Vehicle per Hour (VPH) (One Direction)		Data Source for Peak VPH County-Route-Reference Post Mile (Leg)
	Weekday	Weekend	
Pulga Highway Maintenance Station	96	107	TMS #199 But-70-PM 42.080 (O) August 2016

Junction State Route 89 North and State Route 70	87	137	TMS #306 Plu-70- PM 33.026 (B) August 2016
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Bicycle and Pedestrian Facilities

Bicyclists and pedestrians cross State Route 70 to access commercial, recreational, and residential areas associated with the Plumas National Forest and the small communities located along the canyon. State Route 70 within the Project Limits does not receive a lot of bicyclist use, with the occasional touring bicyclist group or individuals passing through. Large trucks and narrow shoulders discourage bicycling along SR-70.

Environmental Consequences

Alternative A – Proposed Action

Traffic and Transportation

Construction will be conducted under Standard Plan T13 lane closure (reversing, one-way traffic control) at locations 1-8 and 10, and a temporary signal system at Location 9 where the retaining wall will be constructed. Most operations can be conducted during typical 12-hour work shifts. 24-hour traffic control is required during times when traffic is on an un-paved surface. Based on traffic volumes, lane closures will be allowed anytime except after 3:00 p.m. Fridays, on weekends, and "designated holidays" except when Type K Temporary Railing is used. Up to two (2) lane closures will be allowed at any one time.

Proposed construction of a tie back retaining wall at location 9 (PM 20.58) would include the addition of a paved 4-foot shoulder to the roadway. Proposed road widening would improve maneuverability for drivers to react to unexpected situations associated with vehicles pedestrians, wildlife, or canyon debris that may be in the roadway and offer more recovery room for errant drivers to reestablish vehicles on the roadway. The proposed drainage work at location 9 would be adequately sized to withstand the 25 year flooding event, therefore reducing the likelihood of roadway flooding or washout during large storm events.

Upon completion, the proposed project would not add additional vehicular capacity and would not affect traffic volumes. No permanent negative impacts to traffic would occur. The project does not contain design elements, such as additional travel lanes, which would provide additional highway capacity. The posted speed limits on SR-70 would not be changed by the proposed project.

Trucks

State Route 70 is designated as a 65-foot CA Legal Route for STAA trucks. It is not anticipated that traffic control for this project will alter the requirement for STAA truck

routes; therefore, no truck impacts are anticipated. Annual permits are issued for trucks 8.5-ft to 12-ft in width. Occasionally under special approval, single trip permits are issued for trucks over 12-ft in width. Location 9 does include the use of Type K temporary railing or other hard devices; no changes in roadway width available to trucks will occur. A minimum 14-foot paved horizontal clearance will be maintained at all locations.

Bicycle and Pedestrian Facilities

Bicycles and pedestrians are allowed within the project limits. During operations, bicyclists will be subject to stop and delay, and may travel past the work zone using the open lane (the same as vehicle traffic).

Proposed construction at project location 9 would widen the shoulders and would result in an increase in the maneuverability for bicycles and pedestrians at this location.

Alternative B – No Action

Under the no action alternative, proposed permanent restoration to roadway-North Fork Feather River embankment and drainage improvements would not occur, and SR 70 would continue to operate and function at the current level. Existing conditions of the embankment and drainage features at the various project locations would have a greater likelihood of roadway washout and failure, ultimately resulting in a public safety concern and delays/detours for the traveling public.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would implement the following standard avoidance and minimization measures to preserve traffic and transportation/pedestrian and bicycle facilities:

- Pedestrian and bicycle access along SR 70 would be maintained during construction.
- Lane closures on SR 70 will not be allowed when traffic volumes exceed the carrying capacity of approximately 900 vehicles per lane.
- The Contractor would be required to minimize any access delays to driveways or public roadways within or near the work zones.
- Portable changeable message signs will be required for this project.

2.1.3 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing

surroundings (42 United States Code [United States Code] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA) in its implementation of NEPA (23 United States Code 109[h]) directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the State to take all action necessary to provide the people of the State “with...enjoyment of aesthetic, natural, scenic and historic environmental qualities” (CA Public Resources Code [PRC] Section 21001[b]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

A Visual Impact Assessment was completed by Caltrans Staff in September of 2019. The Visual Impact Assessment is the source of information and data in this section.

The project location and setting provides for the context for determining the type of changes to the existing visual environment. The proposed project is located on State Route 70 at ten separate locations from Butte County Line to 3.1 miles west of Route 89. State Route 70, within the project limits is designated as the Feather River Scenic Byway, a National Forest Scenic Byway.

The project is located in the Northern Sierra Mid and Upper Montane Forests as defined by the United States Geological Service. The landform is varied; characterized by steep and rugged rocky slopes falling to the Feather River Canyon floor. The landscape is forested and is characterized by riparian, and mixed montane forest, which includes jeffrey, sugar and lodgepole pine, incense cedar, douglas fir, cottonwood and willow.

The historic Feather River Route railroad line parallels most of the corridor. The tracks meander back and forth across the river, traverse through solid granite tunnels and over steel truss bridges. The route is considered to be one of the most famous and scenic railroad lines in North America.

The land use within the project corridor is primarily rural/recreational with a handful of small residential settlements scattered along the route. Furthermore, there are several hydro-electric facilities managed by Pacific Gas and Electric along the route. Plumas County land use designations based on site location and adjacent include General Forest, Timberland Production, Resort and Recreational (RR), and Secondary Suburban Residential (SSR). The project corridor is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way, and is determined by topography, vegetation, and viewing distance. All of the project locations are eligible for but currently not designated as a State Scenic Highway, however the entire corridor

has federal status as the Feather River Scenic Byway- All American Road. The Middle Fork Feather River was one of the first nationally designated wild and scenic rivers. However, the North Fork Feather River within the proposed project area is not designated as a wild and scenic river.

Environmental Consequences

Visual impacts are determined by assessing changes to the visual resources and subsequently predicting viewer response to those changes.

Alternative A – Proposed Action

The proposed project is compatible with the visual character of the existing work-site locations. The work involves utilizing onsite rock to buttress the existing rock slopes within the river channel. Some vegetation will be removed (generally invasive Himalayan blackberry); although a considerable amount of native vegetation will be replanted within voids in the rock. The work at locations 1-8, and 10 will be various configurations of rock slope protection and planting, similar to the existing conditions. Location 9 will incorporate a retaining wall; however, the visual character will be consistent with the existing visual environment.

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project area. Vividness speaks to the extent the landscape is memorable and is associated with distinctive, contrasting, and diverse elements. Intactness refers to the integrity of visual features in the landscape, and the degree of freedom from non-typical intrusions the existing landscape exhibits. Unity is the extent to which all visual elements combine to form a harmonious, coherent and visual pattern.

Efforts are being incorporated to blend in with the existing visual features of the area and will not have a particularly memorable or intrusive visual impact. The most distinctive new element will be the retaining wall at location 9, however it will receive texture and staining designed to blend in with the existing patterns and textures in the corridor. The visual quality of the existing corridor will not be altered by the proposed project.

Resource Change (changes to visual resources as measured by changes in visual character and visual quality) will be low.

Alternative B – No Action

The no build alternative would have no impact on the visual setting of SR 70. However, if the roadway fails and erodes into the river channel, a significant visual impact could occur.

Avoidance, Minimization, and/or Mitigation Measures

- The project will utilize existing rock and boulders from on-site to stabilize the damaged embankments. Voids between the rocks will be filled with gout and/or planted with native vegetation.

- Architectural treatments will be incorporated into the retaining wall at location 9 to emulate the existing visual environment.
- Most construction staging will be located in established pullouts adjacent to the individual work sites. Access will be from the roadway.

2.1.4 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation [36 Code of Federal Regulations 800]. On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native

American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way.

Affected Environment

Pre-field Literature Search and Native American Consultation

Prior to conducting field surveys, a records search and literature review were conducted to identify previously recorded cultural resources within and/or adjacent to the proposed project area. Sources consulted included, but were not limited to, the Northeast Information Center of the California Historical Resources Information System at Chico State University, and the Sacred Lands File of the Native American Heritage Commission.

In addition, the U.S. Forest Service-Plumas National Forest was also contacted in effort to obtain information regarding known cultural resources within the project area. Similarly, local Native American groups were contacted regarding potential heritage values associated with the project location. Consultation with Native American groups will continue throughout the life of the project.

Study Area

The study area for cultural resources is identified as the Area of Potential Effects (APE). As defined in 36 CFR § 800.16(d), an APE is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.” The Area of Potential Effects was established through consultation between the Caltrans Project Manager and Caltrans Professionally Qualified Staff on October 23, 2019.

Cultural Resource Investigation and Documentation

Intensive field surveys have been conducted to locate and document previously recorded and newly identified cultural resources. Field methods involved surveyors who inspected the ground surface. Surveys also included the assessment of built environment resources, where the properties were photographed and the physical appearance documented.

Throughout the life of the project multiple documents have been prepared in order to report the evaluation of cultural resources and ongoing consultation efforts. An Historic Property Survey Report, a Secretary of the Interior Standards for the Treatment of

Historic Properties Action Plan, a Finding of Effect Document, and an Environmentally Sensitive Area Action plan were completed in January 2020.

Studies identified one historic resource and one pre-historic resource within the Area of Potential Effects. The Feather River Historic Highway District (CA-PLU-970) is an eligible historic property for the National Register of Historic Place and CA-PLU-454, a prehistoric site consisting of Bedrock mortars along the river and a midden deposit upslope of State Route 70.

Archaeological Resources

One previously recorded prehistoric site (CA-PLU-454) was identified within the Area of Potential Effect. The resource is considered eligible for inclusion in the National Registrar of Historic Places and/or California Historical Landmarks. No additional prehistoric cultural materials were identified within the proposed Area of Potential Effect.

Built Environment

Built between March 1928 and August 1937, the Feather River Historic Highway District is approximately 48 miles long and lies between Jarbo Gap in Butte County (PM 35.37) and the town of Keddie in Plumas County (PM 36.0). The District is eligible for the National Register of Historic Places at the state level of significance under criteria A and C. It is associated with the state's efforts to construct an all-weather highway between Oroville and Quincy through extremely rugged terrain, around pre-existing hydroelectric facilities, and a railroad main line. It is also eligible under Criterion C as a significant example of highway engineering and architecture. Its period of significance is that of its construction, 1927-1937. The District is listed in the California Register of Historical Resources and in the Master list of Historical Resources.

General contributors to the District include:

- Stone masonry retaining walls with parapets
- Stone masonry fountains
- Five steel truss bridges, themselves individually eligible, which convey the highway across the Feather River
- Arch Rock, Grizzly Dome, and Elephant Butte tunnels
- Concrete and stone masonry culverts and drains

Environmental Consequences

Alternative A – Proposed Action

According to federal regulations, an adverse effect would occur if the undertaking alters, directly or indirectly, any of the characteristics of a historic property or site that qualify it for the National Register of Historic Places (36 CFR Section 800.5[a][1]).

State regulations state “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (PRC Section 21084.1).

Archaeological Resources

The proposed project work has the potential to affect eligible prehistoric resource CA-PLU-454. However, by implementing standard avoidance and minimization efforts, the proposed project would result in a Finding of No Adverse Effect. The resource will be protected in its entirety.

This historic property is protected by Section 4(f) of the Department of Transportation Act of 1966 within the project vicinity. However, this project will not result in a “use” of this property as defined by Section 4(f). Please see Appendix I under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Erin Dwyer, District Environmental Branch, at (530) 741-4538, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Built Environment

Additionally, the proposed project work has the potential to affect the National Register of Historic Places-eligible property, the Feather River Highway Historic District. Therefore, the Criteria of Adverse Effect must be applied to determine the effects. The historic property is also considered a state-owned historical resource and is on the Master List. Therefore, PRC 5024 applies and requires the application of the List of Adverse Effects:

It has been determined that a Finding of No Adverse Effect is appropriate for the impacts associated with the proposed project. Character Defining Features would not be impacted due to project activities. Minor new elements would be installed in close proximity but would not physically alter the existing Character Defining Features existing. The proposed project would have no effect on the seven aspects of integrity and would still convey historical significance of the Feather River Highway Historical

District. The definition of each aspect of integrity can be found in National Register Bulletin Number 15 *How to Apply the National Register Criteria for Evaluation*. Plumas National Forest Staff assisted with the development of the project and agreed with the Finding of No Adverse Effect.

Section 4(f) of the Department of Transportation Act of 1966 provides protection for historic properties. The proposed project would use land from a non-historic and/or non-contributing property within the Feather River Highway Historic District but does not use any land within the district that is considered contributing to its historical significance. As such, there is no use of the historic district for purposes of Section 4(f). With respect to constructive use, Section 106 consultation resulted in a determination of No Adverse Effect, therefore there is no Section 4(f) constructive use of the district as a whole.

Alternative B – No Build

The No Build alternative would not make permanent restoration changes to State Route 70 in the Feather River Canyon and would therefore have no potential to impact the previously identified cultural resources. However, if permanent restoration improvements are not made, Caltrans risks losing the roadway. If this occurs, there would likely be more substantial impacts to cultural resources in order to bring the highway to operable conditions.

Avoidance, Minimization, and/or Mitigation Measures

- Adverse effects to the Feather River Historic Highway District will be avoided by ensuring that the work will meet the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.
- Prior to beginning of work, the Caltrans Archeologist and Architectural Historian shall ensure that the boundaries of the Environmentally Sensitive Areas for each cultural resource are clearly described and illustrated in the project plans prepared to guide the construction of the project.
 - Caltrans responsible staff will consult with the Resident Engineer to delineate limits of the Environmentally Sensitive Areas – no work shall be conducted within these areas.
- An Environmentally Sensitive Area Action Plan has been developed to ensure impacts to resources do not occur. This plan would be shared with the Resident Engineer, Contractor, and Environmental Construction Liaison.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A. To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

A Floodplain Evaluation (including Location Hydraulic Study) and Water Quality Analysis Report study were completed by Caltrans Staff in January 2020 and September 2019, respectively. These documents are the sources of the following data and information.

Hydrology

The proposed project is within the North Fork Feather River and the East Branch North Fork Feather River watersheds (HUC-8 # 18020121 and # 18020122), which are within the jurisdiction of the Central Valley Regional Water Quality Control Board. The area is generally mountainous and steep, with the North Fork Feather River Canyon and its major tributaries dominating much of the region. The North Fork Feather River watershed extends from its headwater area originating on the southeastern slope of Mount Lassen to Lake Oroville. The river flows approximately 70 miles, draining a watershed of approximately 1,213 square miles (Schilling et al. 2010). The river receives water from many tributaries, which include named creeks and smaller unnamed streams, as it meanders southward to Lake Oroville. The East Branch North Fork Feather River is the largest tributary of the North Fork Feather River. It drains high elevation valleys and joins with the North Fork Feather River near Belden on SR

70. The East Branch North Fork Feather River flows approximately 18 miles (Wixom 1989), draining a watershed of approximately 1,031 square miles (Koll Buer 2003).

Annual average temperatures between the years 2004 and 2014 at Pulga, California ranged from 36°F to 93°F, and average annual precipitation was 58 inches for that timeframe (PRISM Climate Group 2015). Total precipitation in the project area varies from 40 inches in the lower elevations of the canyon, to over 90 inches near Bucks Lake. Precipitation falls primarily as snow above 6,500 ft., and a combination of snow and rain below that elevation. Rain-on-snow events during the winter produce the largest flows and most destructive floods.

The North Fork Feather River is the largest tributary to Oroville Reservoir, which in turn is the main reservoir for the California State Water Project and the second largest reservoir in the state. In the project area, the North Fork Feather River is highly modified by hydropower development. Three separate Federal Energy Regulatory Commission licenses cover the area. Many metrics for water quality and riparian conditions have been collected over the years, triggered by the licensing processes, so there is abundant data for evaluating existing conditions. The North Fork Feather River and its other smaller tributaries can be mostly characterized as steep mountain streams and rivers. Smaller tributaries are extremely steep, and their beds consist of boulders and/or bedrock. Wet meadow and wide, low gradient, riparian habitat is very limited in the surrounding area.

The North Fork Feather River between Lake Almanor and Lake Oroville (54.15 miles) is on the 303(d) list of impaired waters for mercury, polychlorinated biphenyls, temperature and unknown toxicity. Polychlorinated biphenyls were released when a landslide damaged a PG&E switching station near Caribou in 1984, however total daily maximum loads have not been established for any pollutants. Much of this point source pollution has been remediated by PG&E and is documented in the 2015 Final Environmental Impact Statement for the Upper North Fork Hydropower Project (Federal Energy Regulatory Commission 2005). Existing temperature issues have been determined to be caused by the reservoir system including the very large and shallow Lake Almanor. The North Fork Feather River East Branch is not currently 303(d) listed.

The Feather River Canyon is susceptible to large flood flows due to steep topography and potential for rain on snow events. In recent history the area experienced significant flooding in 1986, 1997 (largest recorded) and 2006. Flooding in 1997 caused significant damage to the roadway and bridges closing the highway for many months (Caltrans 2017b).

North Fork Feather River: The North Fork Feather River is a perennial river dominated by very large rock substrate. There is a portion of the bank of this river at project locations 1, 2, 3, 4, 5, 6, and 7. The North Fork Feather River is heavily managed by PG&E for its hydroelectric power operations. Numerous dams impound water and divert it into a system of tunnels and penstocks to generate power.

East Branch North Fork Feather River: The East Branch North Fork Feather River is an upper perennial river dominated by very large substrate (boulders and cobbles, oftentimes granite.) There is a portion of the bank of this river at project locations 8, 9, and 10. There are five unnamed drainage features found in the project limits to convey water into the culverts that eventually empty into the North Fork Feather River or East Branch North Fork Feather River. None of these culverts empty directly into the rivers, and most of the outlets are “shot gun” culverts high above the waterway. Work taking place in jurisdictional waters will require coverage under permits from the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, or the Central Valley Regional Water Quality Control Board, or all.

Floodplain

All proposed work is located in the Federal Emergency Management Agency Flood Insurance Rate Map designated as “Zone X” of the North Fork Feather River or North Fork Feather River East Branch. Zone X is defined as “area of 0.2% Annual Chance Flood Hazard, Area of 1 % Annual chance flood with average depth less than one foot or with drainage area less than one square mile.” The proposed work is expected to have no significant encroachment of the base floodplain. See Appendix G for Federal Emergency Management Agency Flood Insurance Rate Maps.

Environmental Consequences

Alternative A – Proposed Action

Hydrology

Grout Locations:

At locations 1, 2, 3, 4, 5, 6, 7, 8, and 10, grout will be installed above the Ordinary High Water Mark between rocks in order to form rock slope protection clusters with higher effective weight. The clusters will stabilize the bank of the North Fork Feather River and East Branch North Fork Feather River more effectively than individual rocks. This process will also increase the imperviousness of the bank, thereby increasing direct runoff into the North Fork Feather River and East Branch North Fork Feather River. However, the limits of grout are generally small, especially when considered to be between boulder sized rocks. A substantial volume of runoff will not be generated by this project activity. Additionally, stormwater that would have infiltrated between rocks would likely quickly route into the rivers as baseflow anyways.

Vegetation will also be planted between rock slope protection clusters on the river banks. As vegetation grows, it will increase the effective roughness of bank and also act a source of stormwater/rainwater interception. The increase in roughness will reduce flow velocities, which reduces the destructive potential of flood flows. The interception of stormwater/rainwater by planted vegetation, albeit minor, will reduce the erosion potential of raindrops and act as a source of water detention. That is to say, water will be stored on the vegetation leaves and other surfaces. This effect would be minor in comparison to the flows of the river.

Tie Back Retaining Wall:

At location 9, where the tie back wall is being constructed, construction activities would expose bare soil by excavating the grouted rock slope protection embankment. This will be done to create a working bench, where equipment will be brought in to construct the tie back retaining wall. Once the wall is complete, the working bench will be revegetated with native species.

In this location, there will be a reduction in impervious area by approximately 0.5 acres. This will be accomplished by converting grouted rock slope protection to vegetated soil. In the process, stormwaters that would once runoff directly into the East Branch North Fork Feather River could potentially infiltrate into soil or be intercepted by planted vegetation. This would result in a minor detention/reduction of waters into the East Branch North Fork Feather River.

Drainage Repair:

At Location 9, culverts and associated inlet features will be replaced and integrated into the retaining wall design. Generally, culverts will be upsized, and inlets will be designed in a way to maintain safety for the traveling public. These alterations to current facilities will fall within the footprint of existing drainage features and will be considered replace-in-kind.

Upsizing culverts is a benefit to local hydrology, especially during large rain events. The larger pipes can accommodate larger flows by effectively routing water and reducing detention time. As a result, the highway facility is less prone to flood waters and associated damage.

Floodplain:

A “significant encroachment” as defined in 23 Code of Federal Regulations 650.105 is a highway encroachment and any direct support of likely base floodplain development that will involve one or more of the following construction or flood-related impacts:

- A significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route.
- A significant risk (to life or property), or
- A significant adverse impact on natural and beneficial floodplain values.

Through the use of location hydraulic studies and engineering judgement, it has been determined that the proposed action would not result in a significant encroachment of the floodplain, and therefore would not have a significant impact.

Alternative B – No Action

Under the No Action alternative, proposed permanent restoration features would not be made to the highway facility. As such, there would be no impact to the hydrology or floodplain of the basin and North Fork Feather River. However, if improvements are not made, there is a greater potential for the catastrophic failure of the highway (location 9 in particular.) If this were to occur, highway material could be deposited in the North Fork Feather River which would impact the floodplain and hydrology of the system.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would implement the following Standard Measures to ensure minimal impacts to Hydrology and Floodplain resources in the North Fork Feather River:

- The project would comply with the requirements prescribed in Caltrans Statewide NPDES Permit.
- The requirements of Construction General Permit No. CAS000002 (Order No. 2009-0009-DWQ, as amended) for General Construction Activities are applicable to the project since the total disturbed soil area is equal to or greater than 1.0 acre.
- A Caltrans approved Storm Water Pollution Prevention Plan would be required.
- A Contractor prepared Storm Water Prevention Pollution Plan would incorporate appropriate temporary construction site Best Management Practices to implement effective handling, storage, use and disposal practices during construction activities.
- Existing drainage facilities would be identified and protected by the application of appropriate construction site Best Management Practices.
- Caltrans shall implement the programs specified in its approved Storm Water Management Plan. Caltrans NPDES office will participate in early project design consultation with the Regional Board. Coordination with Regional Board staff shall be conducted through the District NPDES Coordinator.

2.2.2 Water Quality and Storm Water Runoff

Regulatory Setting

Various laws and regulations described in this chapter are intended for protecting surface and groundwater quality. These establish water quality compliance standards and waste discharge requirements. Also, they require implementing design, construction, and operational controls for properly managing and treating stormwater runoff and protecting water quality.

Federal Requirements: Clean Water Act

The federal Clean Water Act of 1972 addresses surface water quality control and protection of beneficial uses of water. The purpose of the Clean Water Act is to provide guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters through prevention and elimination of pollution. The Clean Water Act applies to discharges of pollutants into waters of the U.S. The Clean Water Act establishes a framework for regulating stormwater discharges from municipal, industrial, and construction activities under NPDES regulations. In California, the State Water Resources Control Board administers the NPDES program. The following are important Clean Water Act sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers.

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by

the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Clean Water Act and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., such as groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined and this definition is broader than the Clean Water Act definition of “pollutant”. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Board are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act, and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable Regional Water Quality Control Board Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the State Water Resources Control Board identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or Waste Discharge Requirements), the Clean Water Act requires the establishment of Total Maximum Daily Loads. Total Maximum Daily Loads specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and NPDES permits. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollution Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the Clean Water Act requires the issuance of NPDES permits for five categories of stormwater discharges, including Municipal Separate Storm Sewer Systems (MS4s). The U.S. Environmental Protection Agency defines an MS4 as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that are designed or used for collecting or conveying stormwater.” The State Water Resources Control Board has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. The Caltrans MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the Regional Water Quality Control Board issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans MS4 Permit, Permit was adopted on September 19, 2012, and became effective on July 1, 2013. (Order No. 2012-0011-DWQ). The permit has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control stormwater and non-stormwater discharges; and
3. Caltrans stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices, to the maximum extent practicable, and other measures as the State Water Resources Control Board determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout

California. The SWMP assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

Construction General Permit

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

A Water Quality Assessment Report was completed in September 2019.

The project area is situated in the Butt Valley Sub-Area (HSA No. 518.43), which is part of the North Fork Feather River Watershed. The primary receiving water bodies are the North Fork Feather River and East Branch North Fork Feather River. Average elevation is approximately 2200 feet. Average annual rainfall is 67.89 inches, with rainfall intensity of 0.02 inches per hour.

Downstream from Lake Almanor, the North Fork Feather River is included in the Clean Water Act Section 303(d) list for mercury, polychlorinated biphenyls, toxicity, and water temperature. Locations 1 – 7 are located in the river reach included in the 303(d) list. Locations 8 – 10 are in the East Branch NF Feather River, which is not included in the 303 (d) list.

Listed existing beneficial uses for surface water of the North Fork Feather River and tributaries include:

- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Hydropower Generation (POW)
- Municipal and Domestic Supply (MUN)
- Water Contact Recreation (REC1)
- Non-contact water recreation (REC2)
- Spawning, Reproduction, and/or Early Development (SPWN)

The North Fork Feather River is not identified as a sediment-sensitive waterbody.

The Middle Fork Feather River groundwater basin underlies the project. Quaternary lake and alluvial deposits form the Middle Fork Feather River Groundwater Basin. Alluvial deposits in the basin are largely located along the North Fork Feather River. precipitation is the major groundwater recharge source.

Unless otherwise designated by the Central Valley Regional Water Quality Control Board, all ground waters in the Region are considered suitable or potentially suitable,

at a minimum, for MUN, agricultural supply (AGR), industrial service supply (IND) and industrial process supply (PRO).

Groundwater is not expected to be encountered for this project. Location 8, where drilling will occur, may be an exception. Groundwater could be encountered if depending on the depths required to reach bedrock. Specially if the drilled hole depths continued below the active river channel elevation.

Environmental Consequences

Alternative A – Proposed Action

No long-term impacts are anticipated to occur from this project. There are potential short-term water quality impacts having potential to occur during construction.

DSA and new impervious surface for this project have been estimated at 1.50 and 0.24 acres, respectively.

During construction, the expectation for all projects is that all DSA will be adequately stabilized. Conducting work during dry periods along with deploying typically used BMPs such as ground covers and linear barriers is expected to reduce, if not eliminate, potential short-term impacts resulting from unexpected storm events.

Working on river banks that are steep and lead directly to the active channel opens the possibility for incidental earthen materials (e.g. rock, soil) to be released into receiving waters. This is true about Location 9 where excavating is required for constructing the tie back wall. However, the excavator operator is expected to reduce any material from rolling down to the river. Using a technique where excavating is done parallel to the roadway until a containment depression is formed where the edge soils can be pulled into will greatly reduce incidental discharges. Dust is the only material that would be released after a new bench is formed as the excavation continues toward the roadway.

This project is not expected to increase turbidity in receiving waters in the long-term. Disturbed soil areas (DSA) will be permanently stabilized once all paving has been completed and the retaining wall has been completed. Any DSA generated at staging areas will be stabilized using erosion and sediment control BMPs. To prevent downstream sediment releases, replacing existing culverts may require installing clear water diversions on watercourses where flow or standing water is present.

Land use activities have potential to exacerbate sediment transport rates if it includes DSA that is not adequately stabilized. Sediment transport will result from eroding exposed DSA, especially when located adjacent to receiving waters. Sediment transport may contribute to accretion in a watercourse channel.

This project has low potential for altering existing erosion and accretion patterns in the NF Feather River. All DSA will be permanently stabilized once the project is completed by paving, rock slope protection and the soldier pile wall. Also, there is little added

impervious surface associated with this project. For that reason, it is not expected to affect the existing drainage patterns that could influence erosion and accretion.

In general, erosion and accretion have potential to cause long-term water quality impacts. Vertical and lateral erosion and accretion within a stream channel are natural processes. Flow rates, channel gradients, sediment transport rates, channel bank and substrate material composition, and storm frequency are factors that influence erosion and accretion potential.

Using concrete products introduces potential for generating cement-related pollutants (e.g. Chromium VI, high pH). These could be released to receiving waters if appropriate measures are not implemented. Grout is planned to be used in this project immediately adjacent to the active river channel. Measures intended to ensure that this product does not reach the river include using a grout consistency dense enough to adequately fill the desired void spaces and does not flow down slope. Linear barriers will also be deployed between the grouted areas and the active channel.

Minor pH increases could be expected in stormwater runoff from areas where grout is used after construction has been completed. Increased levels would be reduced as the grout curing process continues. Any pH increases associated with stormwater runoff from this project are not expected to impact the receiving waters. Stormwater runoff occurs during rain events when stream flows tend to be higher. Runoff contributed from grouted areas would be quite small compared to the flow in the river. Also, the limited grout to be used will allow faster curing times, any pH increases would be minimal.

Oil, grease and other chemical pollutant-related impacts have both long- and short-term potential. Laboratory analyses from highway stormwater runoff characterization study samples have detected heavy metals, nutrients, and conventional pollutants, among others. These pollutants may originate from vehicle tire and brake wear, fuels and lubricants, and exhaust emissions. Average daily traffic (ADT) volumes, distance between roadway and receiving waterbodies, vegetation density, rainfall intensity, and stormwater volume and conveyance methods, are factors influencing highway-use effects on water quality. The proposed project does not change existing facilities that would trigger an ADT increase. Hence, long-term impacts associated with increased ADT volumes should not be expected to increase.

Heavy equipment and vehicle accidental spills and leaks have potential to occur during construction. These would result in fuels, lubricants, and other chemicals being released if spills and leaks are not adequately cleaned up. Appropriate measures and Best Management Practices would be included in the Stormwater Pollution Prevention Plan to address spill and leaks.

Other chemical residues could result from grinding, painting traffic stripes, saw cutting pavement, and paving. Tracking any of these pollutants offsite could result in their discharge to receiving waters. Implementing routine house-keeping measures is

expected to effectively address potential short-term impacts associated with the activities and chemicals discussed above.

Chemical pollutant releases have the potential to acutely impact aquatic species during the short-term and possibly change the aquatic environment characteristics in the long-term. Incidental minor spills and leakage from vehicles and heavy equipment would be the only chemical sources associated with this project. Routine housekeeping BMPs developed for containing and cleaning spills and/or leakage should adequately address chemical pollutants before these can be exposed to stormwater and transported to receiving waters.

This project does not alter existing conditions that influence temperature, dissolved oxygen or other common parameters. Hence, impacts to such parameters are not expected during either the short- or long-term. The project would include planting vegetation within the rock slope protection where grout will not be used. In the long-term, this vegetation is expected shade active channel sections. This would contribute to reduce high water temperatures.

There are no anticipated changes to aquatic environment characteristics resulting from this project. A SWPPP will be implemented prior to and during construction. The SWPPP should provide appropriate BMPs for effectively stabilizing DSA over both the short- and long-terms. Though work restriction windows are not likely to be included in the project contract work is typically conducted in a dry environment. This avoids potential temporary impacts or provides time and space for cleaning unplanned non-permitted discharges.

New impervious surface associated with this project will be well below one acre. Therefore, it is not required to implement post-construction treatment BMPs.

A Total Maximum Daily Load has not been developed for the NF Feather River. For this reason, obtaining Compliance Units (CUs) is not a current requirement.

Alternative B – No Action

The no build alternative would not make Permanent Restoration improvement to the highway facility. As such, there would not be any project related impacts to water quality and stormwater.

If the project is not constructed, Caltrans risks losing State Route 70. If this occurs, a much larger scale project would be necessary to return the route to a good state-of-repair. This project would likely have a more substantial impact to water quality and stormwater than the Proposed Action.

Avoidance, Minimization, and/or Mitigation Measures

- All construction site BMPs will follow the latest Stormwater Quality Handbook edition.
- Before any ground-disturbing activities, the contractor will be required to prepare a SWPPP that includes erosion and sediment control, and construction waste containment measures for protecting receiving waters.

2.2.3 Hazardous Waste and Materials

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Section 121(d) of CERCLA requires that remedial action plans include consideration of more stringent state environmental “Applicable or Relevant and Appropriate Requirements” (ARARs). The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP) also requires compliance with ARARs during remedial actions and during removal actions to the extent practicable. As a result state laws

pertaining to hazardous waste management and cleanup of contamination are also pertinent.

In addition to the acts listed above, Executive Order 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires clean-up of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection. Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

Affected Environment

An Initial Site Assessment (ISA) was prepared by Caltrans North Region Environmental Engineering staff in October 2019. The purpose of this assessment was to identify any hazardous waste issues within and adjacent to the proposed project area which could affect the design, constructability, feasibility, and/or the cost of the proposed project. A record search of federal, state, and local databases, a map review and a field review were conducted as well. Based on this assessment it was determined the proposed project area may have the potential to contain aerially deposited lead in the soil and naturally occurring asbestos. The project is not considered a “Cortese” listed site, nor would it impact one.

Environmental Consequences

Alternative A – Proposed Action

Based on the records search findings, aerial photographs and a field review, the following conclusions and recommendations are provided below:

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) is known to exist within the limits of this project. As such, a site investigation is required to confirm the presence of NOA. If hazardous levels of NOA are discovered within the work area, Caltrans Standard Special

Provisions would be utilized to minimize potential effects of airborne asbestos. These specifications include monitoring, handling, stockpiling, hauling and disposal of NOA occurring within the work area. Other requirements would include preparation of a Dust Control Plan and Asbestos Compliance Plan, and notification of the Northern Sierra Air Quality Management District (Plumas County) or Butte County Air Quality Management District (Butte County) of the NOA and proposed compliance measures.

Aerially Deposited Lead

Aerially deposited lead from the historical use of leaded gasoline, exists along roadways throughout California. If encountered, soil with elevated concentrations of lead as a result of aerially deposited lead on the state highway system right-of-way within the limits of the project will be managed under the July 1, 2016, Aerially Deposited Lead Agreement between Caltrans and the California Department of Toxic Substances Control. This Aerially Deposited Lead Agreement allows such soils to be safely reused within the project limits as long as all requirements of the Aerially Deposited Lead Agreement are met.

Alternative B – No Action

Naturally Occurring Asbestos

Potentially occurring naturally occurring asbestos within the project limits would not be exposed under the no action alternative. No handling or treatment specifications would be utilized, and no effects are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans' Standard Special Provisions (SSP's) would be included in the construction contract to address the following issues if they are discovered during the site investigation:

- SSP 14-11.10 is required for Naturally Occurring Asbestos (NOA)
- SSP 36-4 is required if the yellow or white thermoplastic and/or paint striping would be removed while grinding the entire pavement surface.

2.2.4 Air Quality

Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six criteria pollutants that

have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM) —which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5}), Lead (Pb), and sulfur dioxide (SO₂). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and in some areas (although not in California), sulfur dioxide (SO₂). California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO₂, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal

Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope¹ that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

The proposed project is within the Northern Sierra Air Quality Management District and the Mountain Counties Air Basin (MCAB).

Affected Environment

Caltrans Staff completed an Air Quality memo in August 2019.

The air quality of a region is determined by the climatological conditions, topography, and the types and amounts of pollutants. California is divided geographically into 15 air basins. An air basin generally has similar meteorological and geographic conditions. The proposed project is located in Plumas County, which is incorporated in the Mountain Counties Air Basin (MCAB).

The Mountain Counties Air Basin covers the mountainous area of the central and northern Sierra Nevada Mountains. Elevations range from several hundred ft. in the foothills, to over 10,000 ft. along the Sierra crest. This air basin includes Plumas, Sierra, Nevada, Central Placer, West El Dorado, Amado, Calaveras, Tuolumne and Mariposa Counties.

In the Mountain Counties Air Basin, regional airflows are affected by the mountains and hills, which direct surface airflows, causing shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Inversion layers, where warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to CO “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between ROGs and oxides of NOx that results in the formation

¹ "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

of ozone (O₃). Because of its long formation time, ozone is a regional pollutant rather than a local hotspot problem. In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin valleys. These transported pollutants predominate as the cause of ozone in the MCAB and are largely responsible for the exceedances of the state and federal ozone ambient air quality standards in the Mountain Counties Air Basin (Caltrans 2016d).

The County's largest sources of particulate matter are unpaved road dust, prescribed burning and residential fuel. Primary activities contributing to these pollutant emissions include wildfires, use of woodstoves, forestry management burns, residential open burning, vehicle traffic and windblown dust. The varying topography of the air basin also contributes to localized air quality issues within valley areas. Table 5 shows the federal and state attainment status for Plumas County. Plumas County is classified as attainment for all National Ambient Air Quality Standards. Plumas County is classified as nonattainment for the PM₁₀ California Ambient Air Quality Standards.

Table 5 - Attainment Status for Project Location

Pollutant	State Status	Federal Status
Ozone (O ₃)	Unclassified	Attainment
Particulate Matter (PM ₁₀)	Nonattainment	Attainment
Fine Particulate Matter (PM _{2.5})	Unclassified	Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment

Environmental Consequences

Alternative A – Proposed Action

Regional Conformity

The project is located in an attainment area for all current National Ambient Air Quality Standards (NAAQS). Therefore, transportation conformity requirements do not apply. Additionally, the proposed project does not change traffic volumes, speeds or composition, and does not change the roadway alignment. Therefore, the project will have no impact on operational emissions in the project area.

Project Level Conformity

Air Quality Analysis shows that the project is exempt from all project-level conformity requirements under Table 2 of 40 Code of Federal Regulations 93.126, Subsection Safety (Projects that correct, improve, or eliminate a hazardous location or feature).

Additionally, Caltrans has transmitted Administrative Modification to the Rural non-Metropolitan Planning Organization area portion of California 2019 Federal Statewide Transportation Improvement Program for this project. These changes are consistent with the Federal Statewide Transportation Improvement Program and have no impact on air quality conformity.

Additional Environmental Analysis

Naturally Occurring Asbestos is known to exist within the limits of this project. As such, a site investigation is required to confirm the presence of naturally occurring asbestos. If hazardous levels of naturally occurring asbestos are discovered within the work area, Caltrans Standard Special Provisions will be utilized to minimize potential effects of airborne asbestos. These Standard Special Provisions include monitoring, handling, stockpiling, hauling and disposal of naturally occurring asbestos occurring within the work area. Other requirements would include preparation of a Dust Control Plan and Asbestos Compliance Plan, and notification of the Norther Sierra Air Quality Management District (Plumas County) or Butte County Air Quality Management District (Butte County) of the naturally occurring and proposed compliance measures.

Construction (Short Term) Impacts and Construction Conformity

Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly-emitted particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants such as diesel exhaust particulate matter. Construction activities are expected to increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Fugitive dust would be generated during grading and construction operations. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site may deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions may vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions depend on soil moisture, silt content of soil, wind speed, and the amount of equipment

operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Alternative B – No Action

The No Action alternative would not construct permanent restoration features to State Route 70. As such, there would not be any short-term degradation of air-quality, emissions from construction equipment would not occur, and fugitive dust would not be released. Overall, there would be no impact to air quality.

If the project is not constructed, Caltrans risks losing State Route 70. If this occurs, a much larger scale project would be necessary to return the route to a good state-of-repair. This project would likely have a more substantial impact to air quality than the Proposed Action.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of the following measures, some of which may also be required for other purposes such as storm water pollution control, will reduce air quality impacts resulting from construction activities.

- The construction contractor must comply with the 2018 Caltrans Standard Specifications in Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including the Northern Sierra Air Quality Management District regulations and local ordinances.
- Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.
- A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Equipment and materials storage sites will be located as far away from residential uses as practicable. Construction areas will be kept clean and orderly.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.

- All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce PM emissions.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

2.2.5 Noise

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration (FHWA) involvement (and the Department, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 6: Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC— reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC— reporting only	Undeveloped lands that are not permitted.
¹ Includes undeveloped lands permitted for this activity category.		

Figure 2 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Figure 4. Noise Levels of Common Activities

According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project

plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Department's *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Affected Environment

Caltrans staff completed a Noise memo in August of 2019. The following information and data are from that report.

Noise-sensitive uses in the project vicinity include scattered rural residences located in the vicinity of the project site and along local roads leading to the project site. The nearest receptors are adjacent to State Route 70, less than 150 feet from the traveled way. This occurs at project location 5, adjacent to Storrie Retreat. The ambient noise environment within the project limits is influenced primarily by motor vehicle traffic and the Union Pacific Railroad. The level of noise at any given location near a roadway depends upon the volume of traffic, vehicle mix (i.e., the relative proportion of autos to trucks), vehicle speeds, setback distance from the roadway, and any barriers between the roadway and receptor. Ambient noise levels due to vehicle use along SR 70 can reach up to approximately 90-100 decibels. This is due to SR 70 being a traveled thoroughfare for the public, heavy equipment, and logging trucks. Logging truck "Jake brakes" typically produce noise in excess of 100 dB at the source (USFWS, 2006).

Environmental Consequences

Alternative A – Proposed Action

23 Code of Federal Regulations 772 defines substantial vertical alignment alteration as a project that removes shielding thereby exposing the line-of-sight between the receptor and the traffic noise source. This is done by altering either the vertical alignment of the highway or the topography between the highway traffic noise source and the receptor. 23 Code of Federal Regulations 772 defines substantial horizontal alignment alteration as a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition. This proposed project meets the criteria for a Type III project as defined in

23 Code of Federal Regulations 772; therefore, a noise study report is not required. Traffic noise impacts are not anticipated, and noise abatement was not considered on this project

During construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise generated by construction activities would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors. At locations 1-8 and 10, work is only expected to last a maximum of 7 working days. Work would not include night activity. Nearby receptors would not be exposed to prolonged noise pollution. At location 9, there are not any residences, businesses, or other receptors in the nearby vicinity and noise impacts are not anticipated.

Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels will vary on a day-to-day basis during each phase of construction depending on the specific task being completed. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications for noise abatement.

Alternative B – No Action

The No Action alternative would not have any noise-related impacts. Sensitive receptors would not be exposed to noise pollution beyond current ambient levels.

If the project is not constructed, Caltrans risks losing State Route 70. If this occurs, a much larger scale project would be necessary to return the route to a good state-of-repair. This project would likely have a more substantial noise-related impact than the Proposed Action.

Avoidance, Minimization, and/or Mitigation Measures

Noise associated with construction is controlled by 2018 Caltrans Standard Specification Section 14-8.02, "Noise Control," which states the following:

- Control and monitor noise resulting from work activities.
- Do not exceed 86 dBA L_{max} at 50 feet from the job site from 9 p.m. to 6 a.m.

In addition to the Standard Specifications, construction noise can be minimized through the following measures:

- Limit operation of pile driver, jackhammer, concrete saw, pneumatic tools, and demolition equipment to daytime hours.
- Unnecessary idling of internal combustion engines should be prohibited.

- Stationary equipment, such as compressors and generators, should be located as far away from residential users as practical.
- Locate equipment and materials storage sites as far away from residential users as practicable.

2.3 Biological Environment

2.3.1 Natural Communities

Regulatory Setting

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

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section 2.3.5. Wetlands and other waters are also discussed below in section 2.3.2.

Affected Environment

The project area is located within the Feather River Canyon. The Feather River flows at the bottom of this steep-sided canyon with topography changing from relatively hilly to mountain ridges with steep slopes and steep-sided canyons (USDA 1998). Elevation within the project area ranges from approximately 1,626 feet to approximately 2,823 feet (Google Earth 2018). The average minimum temperature for Quincy, at the nearest NOAA Cooperative Station, is 33.2 degrees Fahrenheit (°F) and the average maximum temperature is 67.0 °F. Land adjacent to the proposed work areas is generally comprised of steep, rocky, sparsely vegetated slopes heading uphill or steep slopes covered with cemented rock slope protection, vegetation, or loose talus that pitch down towards the North Fork Feather River.

A Natural Environment Study (NES), which describes the existing biological environment and potential project-related impacts, was completed in January of 2020. Natural communities, wildlife corridors, habitat fragmentation, and potential project-related impacts were considered as part of the NES analysis.

Prior to conducting field reviews, the following online databases were queried to generate maps and lists of sensitive biological resources, including natural communities and wildlife corridors, that may occur or are known to occur in the project limits:

- California Department of Fish and Wildlife California Natural Diversity Database (CNDDB);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, Version 8.0;
- California Fish Passage Assessment Database (Cal Fish PAD);
- United States Geologic Survey (USGS) National Hydrography Dataset and Watershed Boundary Dataset (WBD);
- USDA Web Soil Survey;
- United States Forest Service (USFS) Ecological Subregions of California; and
- United States Fish and Wildlife Service (USFWS) List of Potentially Occurring Federally Listed Species
- NMFS West Coast Region (WCR) California (CA) Status Map of Endangered Species Act (ESA) Listings and Critical Habitat Designations: Species list was not obtained as this project is outside of NMFS jurisdiction.
- USFWS online species list database
- USFWS National Wetlands Inventory (NWI) Mapper (2019)
- Regional Forester's Sensitive Species List (2013 FS R5 RF Animal and Plant Species List).
- CDFW California Natural Diversity Database (CNDDB)
- California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants, online Edition (2019)

Field surveys and consultation with regulatory agencies was then conducted to verify the presence of natural communities, wildlife corridors, and habitat fragmentation.

Based on the records and database queries, in addition to the field surveys, it was determined that only one natural community, riparian habitat, is found within the Project limits. As stated above, waters and species critical habitat are discussed in their respective sections.

Riparian

The Feather River supports an undulating band of woody riparian vegetation (primarily willows and dogwoods) on both banks of the river. At project locations 1-8 and 10, most of the woody riparian vegetation grows along the margin of the river, up to one third of the river bank's total height. Above the woody riparian vegetation, annuals and low-lying vegetation occupy the rest of the bank. These annuals and low-lying

vegetation generally grow through voids in the existing grout or rock slope protection. A few non-riparian species grow along the top of the banks and among the annuals and low-lying vegetation. At project location 9, the steep slopes are not vegetated. The embankment is covered with concreted rock slope protection and loose talus that pitches down towards the North Fork Feather River. The only vegetation found at this location is along the river's margin, where no work is proposed.

Drainage features in the project limits generally route flows or seepage from the hillside, shoulders, and pavement. These drainage features support a sparse to moderate amount of woody riparian vegetation. All culvert inlets and outlets are adjacent to the roadway shoulders and in concreted rock slope protection, loose rock slope protection, or loose talus. The inlets and outlets support sparse to zero vegetation. Vegetation at the inlets and outlets consist mostly of annuals and grasses. Himalayan blackberry and star thistle are the most prevalent species at these inlets and outlets.

The function and value of the riparian vegetation within the project limits has become degraded due to the presence of non-native species (mostly Himalayan blackberry). Himalayan blackberry does not support as deep of root system in comparison to many native riparian species. As such, the species does not prevent bank erosion as well as native species. Additionally, Himalayan blackberry does not provide as much shade coverage to riverine habitat as native riparian species. Vegetation shading provides thermal refugia for many aquatic organisms.

Wildlife Corridors and Habitat Fragmentation

Various aquatic and terrestrial wildlife species, including birds, mammals, amphibians, and reptiles, likely use watercourses, such as the North Fork Feather River, and associated riparian habitat, to travel through the project area. Similarly, contiguous blocks of upland habitat within the project area are also likely used as travel corridors by wildlife such as deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and coyotes (*Canis latrans*). Because the project is located in a rural, largely unpopulated area, undeveloped habitat adjacent to SR 70 is largely contiguous. A review of the California Department of Fish and Wildlife's Biogeographic Information and Observation database determined that natural landscape blocks do not overlap the project area, but essential connectivity areas do overlap the project area. However, areas within the project limits have been exposed to a high level of auditory and visual disturbances including traffic from SR 70, Union Pacific and BNSF railroads, and PG&E-operated hydropower facilities.

Both aquatic and terrestrial wildlife likely use existing culverts under SR 70 for migration within the Feather River Canyon. However, the existing seven (7) culverts at Location 9, for which improvements are proposed as part of this project, do not currently provide passage as the culverts have "shotgun" (i.e. are not flush) outlets that exit high on the existing embankment. Additionally, only a minor amount of low value habitat exists at this location. As stated above, land adjacent to the proposed culvert improvements is comprised of steep, rocky, sparsely vegetated slopes.

Similarly, fish passage is a component of habitat connectivity, as it allows for the continuous use of upstream and downstream habitat, less any barriers to migration and movement. A review of the CalFish database identified numerous total fish barriers located within the project area, primarily consisting of the PG&E-operated hydropower facilities. None of the drainage facilities proposed for improvement are considered fish barriers as no suitable fish habitat exists upstream of these culverts. As such, fish passage will not be discussed further in this report.

Environmental Consequences

Alternative A – Proposed Action

Riparian

Placement of shotcrete at project locations 1-8 and 10 would require minor removal of riparian vegetation. Vegetation proposed for removal is primarily Himalayan blackberry, with some annual grasses and herbaceous plants. Removal of woody riparian vegetation or vegetation with well-established roots would be avoided as this vegetation functions to stabilize the banks. Also, as discussed in the project description (Section 1.3.1) riparian vegetation would be planted within the remaining voids of rock slope protection where it is likely to access water and survive (figure 3). This would be done to further stabilize the roadway embankment. At location 9, installation of a new drop inlet at PM 20.80 would also result in minor permanent removal of riparian vegetation. Construction of the retaining wall at this location would not require removal of riparian vegetation.

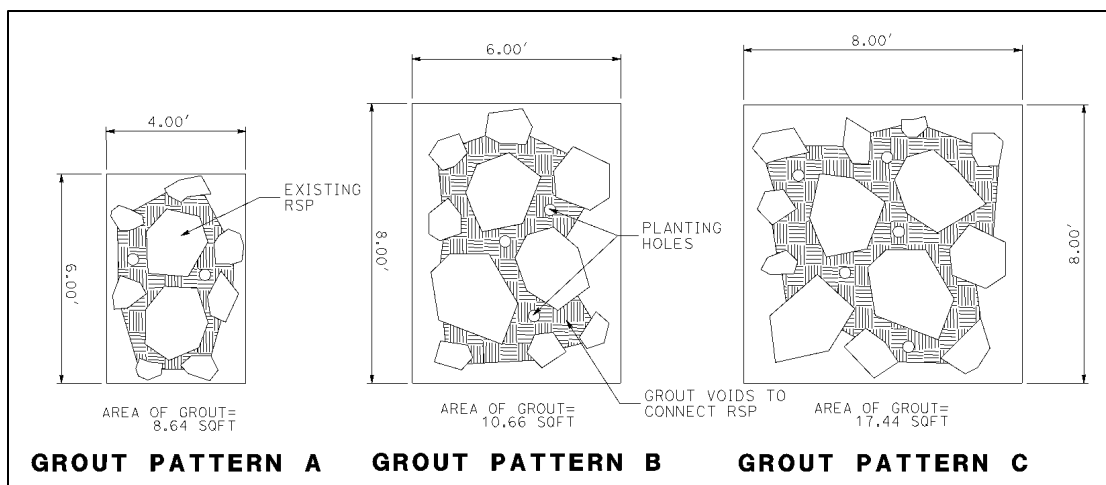


Figure 5. Plant tubes within Grouted RSP Voids

Wildlife Corridors and Habitat Fragmentation

Project construction activities, including the presence of construction personnel and equipment, have the potential to temporarily disrupt terrestrial and aquatic wildlife movement within the project area. Vegetation removal at Locations 1-8 and 10 has the

potential to also temporarily disrupt migration and foraging along the banks of the Feather River. However, as stated above, areas within the project limits have been exposed to a high level of auditory and visual disturbances including traffic from State Route 70, Union Pacific and Burlington Northern and Santa Fe railroads, and PG&E-operated hydropower facilities and the vegetation proposed for removal primarily consist of Himalayan blackberry. Removal of woody riparian vegetation or vegetation with well-established roots would be avoided. In addition, riparian vegetation would be planted within the remaining voids of rock slope protection where it is likely to access water and survive.

The existing “shotgun” culverts proposed for replacement at Location 9 would, upon project completion, outlet through the retaining wall resulting in a 15 to 25-foot vertical drop at the face of the wall. As such, the existing barriers to potential wildlife movement at these culvert locations would be maintained. The Caltrans Project Delivery Team explored potential retaining wall and culvert design configurations to accommodate species passage. Improvements considered included 1) maintaining the existing outlet slope and culvert grades, 2) installing a sub-surface culvert passage system behind the face of the retaining wall, and/or 3) attaching a rock masonry spillway to the new culvert outlets. It was determined that these improvements are not feasible or sustainable based on the existing site conditions, negative floodplain impacts, and the structural performance of the retaining wall. In order to lower the outlet of the culverts, the proposed culvert outlets would need to be placed deeper in the roadway prism. This is not feasible as bedrock is shallow at this location and excavation would be costly. In addition, lowering the outlets would increase water velocities increasing the potential for scour and reducing the ability for a wildlife species to travel through the culvert. Installing a sub-surface culvert passage system behind the face of the retaining wall was determined infeasible as such feature would potentially undermine the structural integrity of the wall and would be impossible to maintain. Lastly, placement of a rock masonry spillways at the culvert outlets would be expected to negatively affect high flows, potentially resulting in scouring of the newly constructed retaining wall. Such structures would also likely be difficult to maintain as they would likely be destroyed during high flows and damage the retaining wall structure. As such, no wildlife passage improvements are proposed at Location 9. Caltrans will continue to explore the feasibility of facilitating wildlife movement at location 9 through the project development process in an effort to improve upon the existing conditions.

Upon completion the proposed project is not expected to result in further impacts to wildlife corridors or habitat fragmentation beyond what the project areas currently experience.

Alternative B – No Action

The no build alternative would not make permanent restoration improvements and would therefore have no impact on natural communities, wildlife corridors, or habitat fragmentation.

If the project is not constructed, Caltrans risks losing State Route 70. If this occurs, a much larger scale project would be necessary to return the route to a good state-of-repair. This project would likely have a more substantial natural communities-related impact than the Proposed Action.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans standard specifications, special provisions, and best management practices (BMPs) will be implemented during construction. Standard specifications and special provisions include project conservation measures to be implemented for the protection of a species and/or its habitat. BMPs are implemented in all Caltrans construction projects. Caltrans may, on project basis, specify or require contractors to implement certain BMPs.

The following standard specifications, special provisions, and BMPs will be implemented for this project.

Riparian

- Vegetation removal will not exceed the minimum necessary to complete the project activities.
- Woody vegetation in riparian areas that are subject to temporary impacts will be trimmed instead of completely removed to promote rapid regrowth. Whenever possible, efforts would be made to leave root systems intact by cutting below ground level to encourage regeneration of riparian vegetation following construction.
- Musk monkey flowers occurring within the roadside ditch located between PM 20.74 and PM 20.81 and at Culvert #6 located at PM 20.84 are expected to be protected in place. However, if impacts are unavoidable, they can be relocated and replanted within the project limits where they are likely to survive.
- The bench feature will be vegetated with native plant species to provide shade and potential habitat for aquatic organisms.
- If it is determined during the regulatory permitting process that additional riparian compensation is required to fully offset impacts, Caltrans would fund and/or implement on and/or offsite creation, enhancement, and/or preservation of riparian habitat.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary

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

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

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

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

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

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality and Stormwater Runoff section and for more details.

Affected Environment

Wetlands

A review of the National Wetlands Inventory Mapper identified the potential for various wetland habitats to occur within the project area. However, field surveys showed no evidence of National Wetlands Inventory Mapper wetlands occurring in the project limits. Field surveys identified a roadside wetland that the Mapper did not identify within the project area at postmile 3.4, however no work is proposed near the wetland. Wetlands will not be impacted as a result of the proposed project. Therefore, a wetland delineation was not conducted for the proposed project, and wetlands will not be discussed further in this report.

Other Waters

Other waters within the Project area include ephemeral, intermittent, and perennial watercourses. Numerous unnamed drainages cross under State Route 70 within the Project limits. A search of the National Hydrography Dataset (NHD) indicated that these unnamed drainages are considered intermittent or ephemeral streams, which mean that the unnamed drainages flow during the wet season (winter-spring) and are dry during the summer months. The North Fork Feather River and North Fork Feather River East Branch, perennial water courses, are located directly adjacent to the project sites. No work would occur below the ordinary high water mark of the North Fork

Feather River or North Fork Feather River East Branch. The ordinary high water mark of the river was determined using hydraulic modeling software which was confirmed during subsequent field visits by looking physical characteristics such as debris, physical weathering of the substrate in the river, and presence/absence of vegetation on the bank.

Of the seven culverts proposed for replacement, three culverts, located at post miles 20.82, 20.85, and 20.93, convey water courses considered to be Waters of the U.S. as they display an ordinary high water mark and are hydrologically connected to the North Fork Feather River. These culverts convey these three unnamed drainage features underneath the highway. A search of the National Hydrography Dataset indicated that these three unnamed drainage features are considered intermittent or ephemeral streams, which mean that the three unnamed drainage features flow during the wet season (winter-spring) and are dry during the summer months.

In addition, a roadside ditch which runs from post mile 20.75 to 20.82 is also considered Waters of the U.S. as it contains a defined channel with bed and bank. Streambed substrates within the roadside ditch consist of mostly fine sand with minimal cobble-gravel. Flows within the ditch are from an adjacent seep and are at their lowest during field surveys conducted in July, August, and September of 2019. No visible vegetation is within the streambed. The culverts at postmiles 20.75 and 20.80 were observed conveying this water.

The remaining culverts convey roadside and stormwater runoff and are not associated with a water course that contains a defined bed, bank, and/or channel. These culverts are typical for roadways that are cut into a hillside where a ditch is on the cut side of the roadway. Drainage activity in these culverts is limited to stormwater runoff during, and for a brief time immediately following, precipitation events.

Table 6. Other Waters and Culverts Proposed for Replacement

Culvert Number	Post Mile	Waters Present/ Absent	Existing Culvert Type	Comments
1	20.58	Existing culvert conveys roadside and stormwater runoff. Flows only observed immediately following rain events. No flows observed during summer months.	18" diameter corrugated steel pipe culvert with concrete inlet.	Conveys roadside and stormwater runoff. Culvert not associated with a water course containing a defined bed, bank, or channel. No vegetation at inlet or outlet

Culvert Number	Post Mile	Waters Present/ Absent	Existing Culvert Type	Comments
2	20.67	Existing culvert conveys roadside and stormwater runoff. Flows only observed immediately following rain events. No flows observed during summer months.	18" diameter corrugated steel pipe culvert with concrete inlet.	Conveys roadside and stormwater runoff. Culvert not associated with a water course containing a defined bed, bank, or channel. Vegetation at inlet is minimal and is mostly annual grasses. Vegetation is absent at outlet
3	20.75	Existing culvert conveys ephemeral flows. Flows, when observed, originate from adjacent roadside ditch	18" diameter corrugated steel pipe culvert with concrete inlet.	Roadside ditch from post mile 20.74 to 20.81 contains a defined bed, bank, and channel. Vegetation at inlet consists of annual grasses and some musk monkey flowers. Vegetation at outlet is minimal and is mostly star thistles and annual grasses
4	20.80	Culvert at this location is a French drain which conveys seepage from the adjacent hillside and water from the adjacent roadside ditch.	12" diameter high-density polyethylene French drain	Inlet is a black pipe placed vertically against the hillside. Unable to locate outlet. It is assumed that the French drain conveys water to the cross culvert located at post mile 20.82. Vegetation at black pipe consists mostly of musk monkey flowers
5	20.82	Existing culvert conveys ephemeral flows originating from adjacent hillside seepage and	24" diameter corrugated steel pipe with concrete inlet.	Vegetation at inlet consists of annual grasses. Loose rocks with no vegetation at outlet.

Culvert Number	Post Mile	Waters Present/ Absent	Existing Culvert Type	Comments
		storm and roadside runoff.		
6	20.85	Existing culvert conveys water from adjacent hillside seepage and an intermittent water course.	18" diameter corrugated steel pipe with concrete inlet.	Vegetation at inlet consists of annual grasses and musk monkey flower. Vegetation at outlet is minimal and is mostly annual grasses.
7	20.93	Existing culvert conveys intermittent flows from adjacent hillside runoff and seepage. Flows only observed immediately following rain events. No flows observed during summer months.	30" diameter corrugated steel pipe with concrete inlet.	Conveys roadside and stormwater runoff. Culvert not associated with a water course containing a defined bed, bank, or channel. Vegetation at inlet and outlet is extremely minimal and is mostly star thistles.

Environmental Consequences

Alternative A – Proposed Action

Alternative A would not result in permanent or temporary impacts to other waters from the placement of shotcrete or grout at Locations 1-8 and 10 as no drainage improvements are proposed at these locations.

However, at Location 9, Alternative A would result in temporary and permanent impacts to other waters as a result of the proposed drainage improvements. Minor permanent impacts to the roadside ditch located between post mile 20.75 and 20.82 would occur due the installation of a new drop inlet at post mile 20.80. At this location a new corrugated steel pipe cross culvert would be installed.

At the remaining culvert locations, only minor temporary impacts are expected to occur as the culverts would be replaced within the footprints of the existing culverts. A

majority of the new culverts would be increased in diameter to handle expected flows and meet current design standards.

Although it is expected that drainage improvements would occur when no-flow or low-flow conditions are present, a temporary creek diversion system (TCDS) may be employed if needed, to isolate the work area from live stream flows. Prior to the employment of the temporary creek diversion system, the contractor shall prepare and submit a temporary creek diversion system plan for review and approval by Caltrans and regulatory agencies.

Indirect impacts caused by construction activities that often occur later in time may include: alteration of hydrology; erosion; increased sedimentation; and introduction of weedy nonnative vegetation. However, Caltrans would implement permanent design features as well as temporary and permanent Best Management Practices (BMPs) that would prevent erosion, increased sedimentation, water quality impacts, and the introduction or spread of noxious weeds.

A California Department of Fish and Wildlife 1600 Lake and Streambed Alteration Agreement, a Regional Water Quality Control Board Section 401 Clean Water Certification, and a Army Corps of Engineers Section 404 Nationwide permit would be required for all work below ordinary high water marks.

Alternative B – No Action

The no build alternative would not make permanent restoration improvements and would therefore have no impact on wetland or waters resources.

If the project is not constructed, Caltrans risks losing State Route 70. If this occurs, a much larger scale project would be necessary to return the route to a good state-of-repair. This project would likely have a more substantial waters-related impact than the Proposed Action.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance, minimization, and/or mitigation measures for wetland resources are not required for this project as there are not any impacts to this resource.

The following avoidance and minimization measures would help to limit impacts to Other Waters of the U.S. resources:

- For the construction of the tie back wall, the contractor would be required to contain all excavation and construction debris within the wall excavation limits and collect all existing concreted rock slope protection removed from the embankment. Containment would be maintained along the entire wall construction to catch debris and prevent it from entering the Feather River. Prior to the employment of the catchment device, the contractor shall prepare and submit an Excavation Plan for review and approval by Caltrans. This plan

would include the contractor's strategy for safe containment of the excavated material.

- For the replacement of culverts and their associated end treatments, work would take place during summer low flows.
- If necessary, all work areas would be dewatered (i.e., TCDS) prior to starting work to minimize potential impacts to water quality in adjacent aquatic habitat.
- If necessary, the contractor would prepare and submit a TCDS plan for review and approval by Caltrans.
- All disturbed areas would be treated for erosion control and would be restored and/or revegetated upon project completion to prevent future erosion into waters.

Although the proposed project would result in temporary and permanent impacts to other waters of the U.S., the impact acreage is small. If determined necessary during the permitting phase of the project, Caltrans would offset impacts to water through in-lieu fee, mitigation banks, or permittee responsible compensatory mitigation.

2.3. Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section 2.3.5 in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

Affected Environment

A Natural Environment Study was completed in January of 2020, which included a records search and database review in order to generate a list of special-status plant species with potential to occur within the project area. This included accessing the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants, as well as the United States Fish and Wildlife Service and United States Forest Service Rare and Endangered Plants lists. Based on the database queries and species elevation requirements, 15 special-status plant species had the potential to occur within the project limits. Field surveys were subsequently conducted in order to determine the presence or absence of special-status species within the project limits and to evaluate potential project impacts. Surveys were conducted throughout the project limits except where access was prohibited due to safety concerns. The surveys were carried out during the blooming period of the special-status plant species in accordance with the CNPS Botanical Survey Guidelines. After further evaluation, none of the 15 special-status plant species have been identified as having the potential to occur in the project limits because they were not observed during field surveys, there are no known occurrences of these species, and/or suitable habitat is not present within the project limits. Additionally, historic observations of these special-status plants were not detailed in online queries. A comprehensive evaluation of each species' potential to occur in the Project limits is included in Appendix D: Regional Species Evaluation Table for plants.

Environmental Consequences

Alternative A – Proposed Action

As discussed above, based on the special-status plant species evaluation and supporting field surveys, no special-status plants occur within the Project limits. Therefore, Alternative A would not result in impacts to special-status plant species.

Alternative B – No Action

The no build alternative would not impact special-status plant species.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed

or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section 2.3.5 below. All other special-status animal species are discussed here, including California Department of Fish and Wildlife fully protected species and species of special concern, and U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration's Marine Fisheries candidate species. Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Wildlife Code
- Sections 4150 and 4152 of the California Fish and Wildlife Code

Affected Environment

Prior to conducting field reviews, online databases were queried to generate maps and lists of all special-status animal species that may occur or are known to occur in the project limits. This included accessing the California Natural Diversity Database, California Department of Fish and Wildlife Lists of Species of Special Concern, United States Forest Service Sensitive Species, and the United States Fish and Wildlife Service list of Birds of Conservation Concern (USFWS 2008). Based on the database queries, fourteen individual special-status wildlife species have the potential to occur within the project limits. A comprehensive evaluation of each species' potential to occur in the project limits is included in Appendix E. Field surveys were subsequently conducted to further determine the presence or absence of special-status animal species within the project limits and to evaluate potential project impacts. Field surveys were conducted by Caltrans' biologists on April 5th, July 15th, August 13th and 19th, and September 24th of 2019. It has been determined that the project limits support suitable habitat for three of these species – hardhead, foothill yellow legged frog, and Sierra Nevada yellow legged frog. Foothill yellow legged frog and Sierra Nevada yellow legged frog, despite appearing on this list and potentially occurring within the project limits, will be discussed in the Threatened and Endangered Species section.

Few wildlife species were encountered during reconnaissance surveys by Caltrans staff. However, common wildlife recorded by the Plumas National Forest Service biologists through their Natural Resource Identification System or observed include American beaver (*Castor canadensis*), coyote (*Canis latrans*), mountain lion (*Puma concolor*), California newt (*Taricha torosa*) ringtail (*Bassariscus astutus*), mallard (*Anas platyrhynchos*), canyon wren (*Catherpes mexicanus*), Steller's jay (*Cyanocitta stelleri*), California scrub-jay (*Aphelocoma californica*), northern flicker (*Colaptes*

auratus), northern shoveler (*Spatula clypeata*), bufflehead (*Bucephala albeola*), American dipper (*Cinclus mexicanus*), Canada goose (*Branta canadensis*), and turkey vulture (*Cathartes aura*).

Special-Status Animals

Hardhead

The hardhead is a fish species listed by the California Department of Fish and Wildlife as a species of special of concern and as a sensitive species by US Forest Service South Pacific Southwest Research Station. Hardheads are stomachless fish with toothless jaws and are residents of the lower reaches of the Feather River. They are typically found in an undisturbed, mid- to- low elevation streams, up to a maximum elevation of 4,757 feet. They prefer clear, deep pools with sand-gravel-boulder substrates, slow velocities, well oxygenated, and temperature ranges from 62.6°F to 69.8°F. They avoid streams that contain introduced fish and that have been greatly altered by human activities. Hardhead diets include aquatic plants and invertebrates that dwell at the bottom of quiet water. The Feather River hardhead is said to live to approximately nine to 10-years-old and grow to a length of 17.3 to 18.1 inches long (Moyle et al. 1995, Moyle 2002).

CNDDDB has no documentation of hardhead occurrence within the project limits. The closest documented occurrence is in the North Fork Feather River 0.80 mile southwest of the Rock Creek Powerhouse. The occurrence is more than 0.25 mile from the nearest project site, PM 3.44.

Intensive fish surveys were not conducted due to safety concerns. However, based on the presence of suitable habitat and nearby known occurrences, the Hardhead is assumed present within the portions of North Fork Feather River located adjacent to the project sites.

Migratory Birds

The database queries did not contain species included on the list of Birds of Conservation Concern, however, suitable habitat is found within the project limits for a small number of birds known to occur near the project location that are afforded protection under the Migratory Bird Treaty Act. No bird nests were observed during reconnaissance surveys.

Environmental Consequences

Alternative A – Proposed Action

Hardhead

The project will have no effect on the hardhead, as no work will occur below the ordinary high water mark of the North Fork Feather River. Additionally, as previously stated, at project Locations 1-8 and 10, riparian vegetation will be planted within voids

of the rock slope protection to further stabilize the roadway embankment. This is expected to offset impacts to riparian vegetation as a result of the grout placement. Caltrans would also implement erosion control and sediment transport best management practices to minimize impacts to water quality.

Migratory Birds

Vegetation removal during the migratory bird nesting season could cause impacts to nesting birds or their young. However, vegetation removal is not anticipated to have a negative effect on migratory birds, because the vegetation removal is scheduled to take place outside of the migratory bird breeding season. Also, vegetation proposed for removal is mostly Himalayan blackberry, annual grasses, and herbaceous plants. Woody riparian vegetation or vegetation with well-established roots will not be removed.

Auditory and visual disturbances generated during work activities could also disturb nesting birds or their young. However, auditory and visual disturbances generated during work activities are not anticipated to have a negative effect on migratory birds, because project auditory and visual disturbance levels are not expected to substantially exceed local ambient auditory and visual disturbances. Ambient auditory and visual disturbances include, but are not limited to, PG&E-operated hydropower facilities, Union Pacific and BNSF Railroads, traffic on SR 70, maintenance and operation of SR 70, and recreational activities in the surrounding areas.

Alternative B – No Action

Under the no action alternative improvements to the storm damaged facility would not be made. Potential effects to special-status animals as related to construction would not occur.

If the project is not constructed, Caltrans risks losing State Route 70. If this occurs, a much larger scale project would be necessary to return the route to a good state-of-repair. This project would likely have a more substantial animal species-related impact than the Proposed Action.

Avoidance, Minimization, and/or Mitigation Measures

Hardhead

The following avoidance and minimization measures would help to limit impacts hardhead. These measures are also intended to protect waters resources:

- For the construction of the tie back wall, the contractor would be required to contain all excavation and construction debris within the wall excavation limits and collect all existing concreted rock slope protection removed from the embankment. Containment would be maintained along the entire wall

construction to catch debris and prevent it from entering the Feather River. Prior to the employment of the catchment device, the contractor shall prepare and submit an Excavation Plan for review and approval by Caltrans. This plan would include the contractor's strategy for safe containment of the excavated material.

- For the replacement of culverts and their associated end treatments, work would take place during summer low flows.
- If necessary, all work areas would be dewatered (i.e., TCDS) prior to starting work to minimize potential impacts to water quality in adjacent aquatic habitat.
- If necessary, the contractor would prepare and submit a TCDS plan for review and approval by Caltrans.
- All disturbed areas would be treated for erosion control and would be restored and/or revegetated upon project completion to prevent future erosion into waters.

Migratory Birds

The following avoidance and minimization measures will help prevent impacts Migratory Birds:

- Vegetation will be removed or trimmed outside of the bird nesting season (i.e., removal will occur between October 1 and January 31).
- If it is not practicable to remove vegetation outside of the bird nesting season, the following guidelines will be executed:
 - Vegetation (i.e., tree, shrub, ground cover) surveys will be conducted no earlier than three days prior to construction by a qualified biologist supplied by the contractor to identify if special-status birds are nesting within the ESL.
 - If special-status bird nests are found during pre-construction surveys:
 - The areas will be marked as environmentally sensitive and nests will be monitored by a qualified biologist supplied by the contractor for disturbance during construction; and
 - Buffer areas will be delineated around areas with active nests, and bird-disturbing construction activities within the buffer area will not occur.
- Vegetation removal will not exceed the minimum necessary to complete the project activities.
- Woody vegetation in riparian areas that are subject to temporary impacts will be trimmed instead of completely removed to promote rapid regrowth.

- Whenever possible, efforts shall be made also to leave root system intact by cutting below ground level to encourage regeneration of riparian vegetation following construction.
- The working bench will be vegetated with native plants (i.e., willow species).

2.3.5 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone

established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

An evaluation of potential impacts to biological resources protected under the Federal Endangered Species Act and/or the California Endangered Species Act was conducted for the proposed project. Species considered under the Federal Endangered Species Act were based on a list (Appendix F), provided by the U.S. Fish and Wildlife Services, of federally threatened and endangered species potentially occurring within the project area. Based on the presence/absence of suitable habitat and species' distribution ranges, it was determined that three federally listed species were identified as potentially occurring within the project area. No Critical Habitat or Essential Fish Habitat was identified for any species within the project area. Similarly, databases managed by the California Department of Fish and Wildlife were accessed in order to identify potentially occurring state listed species. The database queries identified nine state listed species potentially occurring within the project area. However, upon further review, due to the lack of suitable habitat, it was determined that two State/federally listed species were identified as potentially occurring within the project area. Information regarding species listed under the Federal Endangered Species Act and/or the California Endangered Species Act with no real potential to occur within the project limits, and thus no potential to be impacted by the proposed project, is documented in Appendix E and no further discussion is provided.

Additionally, the project limits and the North Fork Feather River are outside of the range of anadromous fish species due to Lake Oroville Dam (total barrier), and as a result no anadromous fish species under the Federal Endangered Species Act occur within the vicinity of the proposed project (NMFS 2019).

Sierra Nevada Yellow Legged Frog

The Sierra Nevada yellow legged frog is a federal endangered species and a California threatened species. These frogs are found east of the Sierra Nevada crest at an elevation of 4,500 to 12,000 feet but can occur as low as 3,500 feet in elevation in the northern portions of their range. They are affiliated with streams, ponds, tarns, springs, and lakes in montane riparian habitats. The Sierra Nevada yellow legged frogs are rarely encountered more than a few feet of water. These highly aquatic species prefer to reside in open stream and lake edges with gentle slope, where there is little or no vegetation. During the winter, the species oftentimes hibernate at the bottom of frozen lake, emerging shortly after snow melts. They are active only for about three months during years of heavy snow. They feed primarily on aquatic and terrestrial invertebrates and insects. They may also consume dead frogs and their own eggs.

The California Natural Diversity Database has no documentation of Sierra Nevada yellow legged frogs within the project limits. The closest documented occurrences are west of Grizzly Forebay along Big Ravine and a tributary to the west. The occurrences

are about 1.30 miles from project sites located at PM 3.44 and 4.34 on State Route 70.

No protocol-level surveys for the Sierra Nevada yellow legged frogs were conducted as part of the biological review for this project. However, coordination with Mr. Wiseman, Garcia and Associates' Herpetologist, indicated that there are known frog populations in the surrounding areas, but the occurrences are at a higher elevation. Sierra Nevada yellow legged frogs are not known to occur down in the Feather River Canyon along the North Fork Feather River. Geographical data from the U.S. Forest Service also shows no known occurrences of these frogs within the project limits.

Reconnaissance surveys for the frogs were conducted in April, July, August, and September in 2019. Surveys were limited to accessible areas due to steep terrain in some areas. No Sierra Nevada yellow legged frogs were observed during these surveys.

Foothill Yellow Legged Frog

Foothill yellow-legged frogs are listed as a candidate state threatened, a state species of special concern, a USFS Sensitive Species, and a Bureau of Land Management (BLM) sensitive species. The frog's distribution range extends in elevation from sea level to approximately 5,000 feet in the Sierra Nevada's. Specimens catalogued at the University of California Museum of Vertebrate Zoology show that this species has been recorded at elevations as high as 6,000 feet (Zweifel 1955 cited in PG&E 2002). However, surveys conducted by PG&E (2002) within the Feather River Canyon indicate that the FYLF occurred mostly below 2,500 feet.

Foothill yellow legged frogs are highly aquatic, spending most or all their life in or near waterbodies, although they have been documented underground and beneath surface objects more than 165 feet from water (Nussbaum et al. 1983). They are typically found close to water and associated with perennial streams and intermittent creeks that retain perennial pools throughout the summer. The frogs generally prefer low to moderate gradient watercourses but may use moderate to steep gradient watercourses outside of the breeding period. Typical habitats include riffles, runs, plunge-pools, cascade pools, and step-pools, especially for escape covering. Adults preferentially use shallow edgewater that has less than 0.33 foot/second of flow and has a depth of less than 16 inches (PG&E 2002) for breeding. Velocities greater than 0.67 foot/second will cause partial egg mass scouring (Kupferberg 1996 cited in PG&E 2002).

There is little data on the dispersal and migration patterns of foothill yellow legged frogs, but anecdotal evidence suggests that these frogs can travel up to 40 meters laterally from stream channels via tributaries and moist seeps away from breeding sites for dispersal and potentially for overwintering (Jennings and Hayes 1994, Bourque 2008, and J. Drennan, pers. comm. 2018).

The California Natural Diversity Database has no documentation of foothill yellow legged frogs within the project limits. The closest documented occurrences are located

within the North Fork Feather River from the arch rock tunnel to 1.4 miles downstream of arch rock tunnel and within 0.3 mile of lower Bear Ranch Creek. The occurrences are approximately 0.75 mile from the nearest project site.

No protocol-level surveys for the foothill yellow legged frogs were conducted as part of the biological review for this project. However, coordination with Mr. Wiseman, Garcia and Associates' (GANDA) Herpetologist, indicated that there are no known foothill yellow legged frog populations within the project limits. The lowest project site, right at the Butte and Plumas County line, is about 0.75 mile upstream of the known highest elevation of the frog's population on the Cresta Reach. Foothill yellow legged frogs are known from that point downstream along SR 70. Geographical data from the US Forest Service also show no known occurrences of foothill yellow legged frogs.

Reconnaissance level surveys for the foothill yellow legged frog were conducted in April, July, August, and September of 2019. Surveys for the frogs were limited to accessible areas due to steep terrain in some areas. No foothill yellow legged frogs were observed for this period of field surveys.

Environmental Consequences

Alternative A – Proposed Action

Sierra Nevada Yellow Legged Frog

Work proposed for the application of shotcrete, construction of the tie back wall, and the replacement of culverts is not anticipated to have an impact on Sierra Nevada yellow legged frogs, as all work will be completed outside of the Ordinary High Water Mark of the North Fork Feather River. Additionally, the Sierra Nevada yellow legged frog is typically found at a minimum elevation of 3,500 feet and the project area is at maximum 2,823 feet. Furthermore, based on the information gathered from California Natural Diversity Database, U.S. Forest Service, and Garcia and Associates, these frogs are not known to use the river reaches at the project sites.

Foothill Yellow Legged Frogs

Work proposed for the application of shotcrete, construction of the tie back wall, and the replacement of culverts is not anticipated to have an impact on Sierra Nevada yellow legged frogs, as all work will be completed outside of the Ordinary High Water Mark of the North Fork Feather River. Based on the information gathered from California Natural Diversity Database, U.S. Forest Service, and Garcia and Associates, these frogs are not known to use the river reaches at the project sites.

As discussed in Section 2.3.1, the proposed project is not anticipated to affect amphibians beyond current conditions. The existing culverts proposed for replacement do not provide habitat connectivity, as all of these culverts have outlets that “shotgun” high on the existing embankment. Depending on where they sit on the embankment,

the vertical height between the existing culvert outlets and the North Fork Feather River is 20-35 feet. Because of the vertical drop, frog passage is precluded. In addition, vegetation occurs at only a couple of the inlets and consists mostly of star thistles and annual grasses. The entire existing embankment is covered with cemented Rock Slope Protection or loose talus that pitch down towards the North Fork Feather River.

The proposed culverts will exit through the newly constructed tie back wall at heights of 15-25 feet. Caltrans considered several design modifications to accommodate amphibian passage. It was determined that the design modifications were not feasible nor sustainable. Thus, frog passage through the vertical retaining wall is not proposed. However, the newly constructed bench located at the base of the new retaining wall, in areas directly below culverts that have residual flows, will be vegetated with native plants (i.e., willow species). Overtime, these areas are expected to contain microhabitat characteristic appropriate for use by amphibians.

Caltrans has determined the project will have no effects on federally or state listed plant and wildlife species. There is no Critical Habitat or Essential Fish Habitat within the project area.

Alternative B – No Action

Under the no action alternative, no effect to Federal Endangered Species Act or Californian Endangered Species Act listed species would occur.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required

2.3.6 Invasive Species

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project. The California Invasive Species Advisory Committee has been tasked with maintaining a working list of invasive species based on coordination and input from stakeholders including local governments, tribal governments, federal agencies, as well as environmental organizations, academic and science institutions, affected industry sectors and impacted landowners.

Affected Environment

A Natural Environment Study was completed in January 2020. The project limits were surveyed for invasive species as part of the NES effort. Plant species observed in the project limits that are included on the California Invasive Species Advisory Committee's 2010 list of invasive species are:

- Black mustard (*Brassica nigra*)
- Downy brome (*Bromus tectorum*)
- Himalayan blackberry (*Rubus armeniacus*)
- Medusahead (*Taeniatherum caputmedusae*)
- Ripgut brome (*Bromus diandrus*)
- Soft brome (*Bromus hordeaceus*)
- St. John's wort (*Hypericum perforatum*)
- Yellow starthistle (*Centaurea solstitialis*)
- Wildoat (*Avena fatua*)

These invasive plants are predominantly found within one foot of the edge of pavement or within roadway turnouts that will be used for staging. Himalayan blackberry was found at almost every culvert location and along the North Fork Feather River's banks. No invasive animals or any indication of pathogenic organisms were observed during site surveys.

Environmental Consequences

Alternative A – Proposed Action

Disturbance often creates ideal conditions for the introduction and spread of non-native invasive species. Proposed activities with potential to alter existing habitat conditions include new construction access and bench excavation associated with the tie back wall construction at Location 9. Other locations (where rock slope protection will be grouted) will be disturbed, however these locations will not disturb bare soil. The increased disturbance due to project activities may result in a risk of introduction or spread of invasive plant species. In order to avoid the potential for introduction of invasive plant species, standard measures and Best Management Practices would be implemented during project construction. The implementation of these measures would greatly reduce the potential to introduce invasive species to new areas and spread existing infestations, thus avoiding project related direct and indirect effects. Additionally, the scope of the proposed project includes removing Himalayan blackberry in order to grout rock slope protection.

Alternative B – No Action

The no build alternative would not make roadway improvement and would therefore not disturb the natural environment more than the current level. As such, the potential spread of invasive species due to project activities would be not occur.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans standard specification, special provisions, and BMPs:

- Preserve and protect existing vegetation not to be removed. Disturbance or removal of existing vegetation shall not exceed the minimum necessary to complete the project.
- Clean or wash vehicles and equipment before entering and leaving the job site.
- Following construction, all disturbed soil areas will be stabilized with erosion control measures, and erosion control materials such as straw and seed mixes will be certified weed-free.
- Plans will show plant species that will be used for erosion control. They will consist of native species or non-persistent hybrids that will prevent invasive species from colonizing disturbed areas.
- Straw must be certified weed free under the Department of Food and Agriculture. Straw must be free of plastic, glass, metal, rocks, and refuse or other deleterious material.

Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

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

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

Environmental Consequences

Alternative A – Proposed Action

The cumulative analysis for each resource is included in this section. Resources that will not be impacted (listed at the beginning of Chapter 2) will not be discussed. Based on the proposed project minimization or avoiding potential adverse effects through use of standard construction/design practices, no effects were determined to be cumulatively significant. A majority of potential effects are temporary and would be avoided or greatly reduced upon project completion with proper erosion control, construction methods, best management practices, and onsite revegetation.

Parks and Recreation Facilities

Recreation opportunities would be maintained or improved under the proposed action by providing a safer highway facility that is resistant to stormwater related damage and subsequent closure. No permanent impacts are anticipated upon project completion. A visitor may choose to select an alternate recreation site to avoid temporary construction areas. Construction is proposed for one dry weather season. This work will occur within the Caltrans right-of-way, and public utilization of these areas for recreation is not anticipated. The permanent restoration construction under the proposed project would have any cumulative impacts on recreation sites or opportunities in the project area.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Upon completion, the proposed project would not add additional vehicular capacity and would not affect traffic volumes. The project does not contain design elements such as additional travel lanes, which would provide additional highway capacity. No permanent negative impacts to traffic are anticipated. The posted speed limits on SR-70 would not be changed by the proposed project.

Construction will be conducted under Standard Plan T13 lane closure (reversing, one-way traffic control) at all locations. Most operations can be conducted during typical 12-hour work shifts. 24-hour traffic control is required during times when traffic is on an un-paved surface. Based on traffic volumes, lane closures will be allowed anytime except after 3:00 p.m. Fridays, on weekends, and "designated holidays" except when Type K temporary railing is used. Up to two lane closures will be allowed at any one time.

Impacts to Traffic and Transportation/Pedestrian and Bicycle Facilities will be temporary, lasting one construction season. Traffic handling will be coordinated so delays are minimized. Cumulative impacts to this resource are not expected.

Visual/Aesthetics

The proposed project is compatible with the visual character of the existing work-site locations. The work involves utilizing onsite rock to buttress the existing rock slopes within the river channel. Some vegetation will be removed (generally invasive Himalayan Blackberry); although a considerable amount of native vegetation will be replanted within voids in the rock to further reinforce the roadway embankment. The work at Locations 1-8, and 10 will be various configurations of rock slope protection and planting, similar to the existing conditions. Location 9 will incorporate a tie back retaining wall; however, the visual character will be consistent with the area because the wall will be designed to be consistent with the existing visual environment. As such, the proposed project would not contribute to any potential visual/aesthetic cumulative impacts.

Cultural Resources

As stated in Section 2.1.5 Cultural resources have been identified within the proposed project's Area of Potential Effect. However, it has been determined that the project would result in no adverse effects to these resources. The resources will be identified on the project plans and in the field as Environmentally Sensitive Areas and will be fenced off during construction. Throughout the environmental process, staff have developed measures and worked with other project staff in order to protect these resources. This had led to a determination by staff of a Finding of No Adverse effect. Therefore, the proposed project would not contribute to a cumulative impact to cultural resources .

Hydrology and Floodplain

The proposed action will increase the impervious area of the embankment between SR 70 and the North Fork Feather River by applying grout to rock slope protection that is currently protecting the highway facility. This will result in a minimal increase in runoff generated when the river is at relatively low flows. When the river is at higher flows and inundates the grouted rock slope protection, additional runoff (in comparison to no-build or current conditions) will not be generated. The project is not expected to offset surface water generation by planting native vegetation and improving water conveyance features along the highway. As such, the proposed project is not expected to contribute to a cumulative impact to hydrology.

The proposed action is considered a longitudinal encroachment of the base floodplain, as described in the Floodplain Evaluation Report Summary. However, the purpose of the proposed project is to improve river hydraulics and allow the river to reclaim hazardous areas of the base floodplain (Location 9). There are not any risks associated with the implementation of the project, and the proposed action does not constitute as a significant floodplain encroachment as defined in 23 Code of Federal

Regulations, Section 650.105(q). Location Hydraulic Studies and engineering judgement were used to make this determination. As such, the proposed project is not expected to contribute to a cumulative impact to the floodplain.

Water Quality and Storm Water Runoff

The proposed action is not expected to increase turbidity in receiving waters in the long-term. Disturbed soil areas will be permanently stabilized upon project completion. Any DSA generated at staging areas will be stabilized using erosion and sediment control BMPs. To prevent downstream sediment releases, replacing existing culverts may require installing clear water diversions on watercourses where flow or standing water is present. Oil, grease, and other chemical pollutants related to the highway facility are not expected to increase. Best management practices will be included during construction to prevent any construction-related discharges. Therefore, the project's incremental contribution to impacts to water quality and storm water runoff is not considered to be cumulatively considerable.

Hazardous Waste

An Initial Site Assessment was prepared by Caltrans North Region Environmental Engineering staff in October 2019. The purpose of this assessment was to identify any hazardous waste issues within and adjacent to the proposed project area which could affect the design, constructability, feasibility, and/or the cost of the proposed project. A record search of federal, state, and local databases, a map review and a field review were conducted as well. Based on this assessment it was determined the proposed project area may have the potential to contain aerially deposited lead in the soil, lead within traffic stripes, naturally occurring asbestos, and treated wood waste. The project is not considered a "cortese" listed site, nor does it impact one. Naturally occurring asbestos will be treated/contained using Caltrans specification.

The proposed project is not expected to contribute to a cumulative impact to hazardous waste. **Air Quality**

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds (VOCs), directly-emitted particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants such as diesel exhaust particulate matter. Construction activities are expected to increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Air quality analysis shows that the project is exempt from all project-level conformity requirements under Table 2 of 40 Code of Federal Regulations 93.126, Subsection Safety (Projects that correct, improve, or eliminate a hazardous location or feature). Additionally, the proposed project does not change traffic volumes, speeds or

composition, and does not change the roadway alignment. The project will have no impact on operational emissions in the project area.

Therefore, the project's incremental contribution to impacts to air quality is not considered to be cumulatively considerable.

Noise

The proposed project does not construct a new highway in a new location or substantially change the vertical or horizontal alignments and does not include any other activities discussed in the definition of a Type I project. This project meets the criteria for a Type III project as defined in 23 Code of Federal Regulations 772. Traffic volumes, composition and speeds would remain the same in the build and no build condition. Traffic noise impacts are not anticipated, and noise abatement was not considered on this project.

The project does have the potential to result in temporary construction-related noise impacts, these impacts would be temporary in nature and limited to the immediate area surrounding the construction site.

Therefore, the project's incremental contribution to noise-related impacts is not considered to be cumulatively considerable.

Natural Communities

The proposed project will have a minor impact on natural communities in order to complete improvements to storm-damaged facilities on Plumas 70. However, these impacts are minor and will be offset by the net improvement of habitat in the project limits. Native vegetation will be replanted to provide habitat and cold water refugia for various species.

The project's incremental contribution to natural communities impacts is not considered to be cumulatively considerable.

Wetlands and Other Waters

Impacts to wetlands and other waters due to the project is estimated to be less than 0.005 acres. This is associated with the alteration of existing culverts at location 9. Although permanent impacts are occurring, efforts will be made to improve waters habitat by planting native vegetation and reducing flow velocities in culverts. The scope of work will that impacts waters resources is minimal and would not contribute to a cumulatively considerable impact on this resource.

Plant Species

It was determined through comprehensive evaluation that Special-Status plants do not exist within the project environmental limits. There are no impacts to Plant Species

due to the project, therefore the project would not contribute to any potential cumulative impact.

Animal Species

Database queries and species distribution ranges were analyzed by Caltrans staff to determine the presence of special status wildlife within the project area. It was determined that the Hardhead fish was the only species that had the potential to exist within the project area. The project will not impact habitat for this species and numerous minimization measures will be implemented to ensure there are not any impacts on this species. As such, a cumulative impact to this resource is not anticipated.

Threatened and Endangered Species

Database queries and species distribution ranges were analyzed by Caltrans staff to determine the presence of Threatened and Endangered Species within the proposed project area. Two species, the Sierra Nevada yellow-legged frog and Foothill yellow-legged frog, appeared to have the potential to exist within the project area, but was determined through biological analysis to not appear in the project area. The scope of work will not contribute to cumulative impacts to the Threatened and Endangered Species.

Invasive Species

Many invasive species are known to exist within the project area and vicinity. Caltrans staff have developed measures and minimization efforts in order to prevent the introduction and spread of invasive species within the project area. In addition, it is within the scope of work to remove Himalayan blackberry, which is an invasive species, in order to complete grouted of rock slope protection. These areas will then be replanted with native riparian vegetation. The scope of work will not substantially contribute to cumulative impacts caused related to invasive species.



Chapter 3 **CEQA Evaluation**

3.1 Determining Significance under CEQA

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

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

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

3.2 CEQA Environmental Checklist

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

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

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

3.2.1 Aesthetics

CEQA Significance Determinations for Aesthetics

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

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

No impact. The proposed project would not have a substantial adverse impact on a scenic vista because the project area does not include any scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than significant impact. As stated in the Visual/Aesthetic section in Chapter 2, the proposed project would require vegetation removal (generally invasive Himalayan blackberry) during slope stabilization and drainage improvement activities. However, riparian species will be planted within the project areas to further stabilize the banks of the North Fork Feather River. Location 9 would include construction of a retaining wall; however, the visual character of the retaining wall would be consistent with the existing visual environment. Other scenic resources, including, but not limited to, rock outcroppings, and historic buildings within the Feather River Canyon Historic Highway District will not be damaged due to project activities. Measures have been taken to protect such features as they exist within the project location, including Environmentally Sensitive Area (ESA) fencing, and consultation with relevant and responsible agencies. The proposed project would not diminish the views that make the highway eligible for scenic status. Therefore, the project would have less than significant impacts to scenic resources. No mitigation is required.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant impact. Project design features are consistent with the existing visual character and will not detract from public views of the sites and their surroundings. Grouted rock slope protection is common with the Feather River Historic Highway district, so locations where grouting rock slope protection is planned would be consistent with the existing visual character. Location 9 will include construction of a retaining wall; however, the visual character of the retaining wall will be consistent with the existing visual environment. Additionally, native vegetation will be planted to further stabilize slopes. This will contribute to the visual character and quality of public views in the project location and the Highway District as a whole. Therefore, the project would not substantially degrade the existing visual character or quality of public

views of the sites and their surroundings, resulting in a less than significant impact. No mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No impact. The project will not create any new light sources or glare that would impact day or nighttime views in the area.

3.2.2 Agriculture and Forest Resources

CEQA Significance Determinations for Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project 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?

No impact. According to the important farmland maps, areas surrounding the project limits are listed as non-agricultural or natural vegetation. The proposed project is not within farmland (i.e. areas that include Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and properties in Williamson Act contract) (California Department of Conservation, 2016). No impacts to important farmland will occur as a result of the project.

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

No impact. According to the important farmland maps, areas surrounding the project limits are listed as non-agricultural or natural vegetation. The proposed project is not within farmland (i.e. areas that include Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and properties in Williamson Act contract) (California Department of Conservation, 2016).

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

No Impact. The various project locations fall within Plumas county and are therefore subjected to the Plumas County General Plan land use designation. According to the Plumas County General Plan map, all project locations fall within assessor parcel numbers (APN) that are designated as General Forest and Timberland Production (Plumas County, 2016). This land use designation and zoning allows forest management and the harvesting/processing of forest products. However, the proposed project would occur within existing Caltrans right-of-way and would not conflict with existing zoning or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

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

No impact. The proposed project would occur within existing Caltrans right-of-way and would not result in the loss of forest land or conversion of forest land to non-forest use.

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

No impact. The proposed project would not 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.

3.2.3 Air Quality

CEQA Significance Determinations for Air Quality

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

Would the project:

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

No impact. The proposed project would comply with all applicable laws and regulations related to air quality, including the Northern Sierra Air Quality Management District regulations and local ordinances.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than significant. The project region is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards. Therefore, transportation conformity requirements do not apply. Although Plumas County is classified as nonattainment for the PM₁₀ California Ambient Air Quality Standards and the proposed project has the potential to result in generation of PM₁₀, project-related impacts would be temporary in nature and limited to the immediate area surrounding the construction site. Additionally, the project would not change traffic volumes, fleet mix, speed, or any other factor that would cause an increase in emissions; therefore, this project would not cause an increase in operational emissions. Impacts will be less than significant and no mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant. Constriction activities would be short-term in duration and the impacts would be localized. The project would not expose any sensitive receptors to substantial pollutant concentration. The primary pollutant of concern associated with project activities is fugitive dust, and measures will be taken to reduce emissions. Impacts will be less than significant and no mitigation is required.

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

Less than significant. Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of paving sites. However, paving will be a minimal project activity and will only be required at location 9. Additionally, such odors would quickly disperse to below detectable levels as distance from the site increases. This is a rural area with few residences in the project limits, let alone the immediate area. Impacts will be less than significant and no mitigation is required.

3.2.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

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

Less than significant impact. One special status species, the hardhead fish, and migratory birds were identified as having potential to be present within the project area. However, no work is proposed within the North Fork Feather River and only a minor amount of nesting vegetation would be removed. Additionally, avoidance and minimization efforts have been put in place in order to prevent

impacts to these species. The project will have no effects on federally or state listed plant and wildlife species. There is no Critical Habitat or Essential Fish Habitat within the project area. The proposed project would result in less than significant impact and mitigation is not required.

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

Less than significant impact. The proposed project would remove a minor amount of riparian habitat along the North Fork Feather River. However, riparian vegetation removed during project activities would primarily consist of Himalayan blackberry – an invasive species. As part of the scope of work, Caltrans proposes to replant native riparian vegetation, such as willow species and dogwood, to further stabilize the roadway embankment within the project limits. This would promote a more natural and healthy riparian system in the project area once the vegetation is established. Caltrans does not anticipate a net loss in riparian vegetation once the project is complete. The proposed project would result in less than significant impact and mitigation is not required.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No impact. Field surveys showed no evidence of protected wetlands being within areas of project impact. Wetlands within the project limits will not be directly or indirectly impacted by project activities.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than significant impact. Project construction activities, including the presence of construction personnel and equipment, have the potential to temporarily disrupt terrestrial and aquatic wildlife movement within the project area. Vegetation removal at Locations 1-8 and 10 has the potential to also temporarily disrupt migration and foraging along the banks of the Feather River. However, as stated above, areas within the project limits have been exposed to a high level of auditory and visual disturbances including traffic from State Route 70, Union Pacific and Burlington Northern and Santa Fe railroads, and PG&E-operated hydropower facilities, and the vegetation proposed for removal primarily consist of Himalayan blackberry. Removal of woody riparian vegetation or vegetation with well-established roots would be avoided. In addition, riparian vegetation would be planted within the remaining voids of rock slope protection.

The existing “shotgun” culverts proposed for replacement at Location 9 would, upon project completion, outlet through the retaining wall resulting in a 15 to 25-foot vertical drop at the face of the wall. As such, the existing barriers to wildlife movement at these culvert locations would be perpetuated. However, only a minor amount of low value habitat exists upslope at this location. As stated previously, land adjacent to the proposed culvert improvements is comprised of steep, rocky, sparsely vegetated slopes.

Similarly, fish passage is a component of habitat connectivity, as it allows for the continuous use of upstream and downstream habitat, less any barriers to migration and movement. A review of the CalFish database identified numerous total fish barriers located within the project area, primarily consisting of the PG&E-operated hydropower facilities. None of the drainage facilities proposed for improvement are considered fish barriers as no suitable fish habitat exists upstream of these culverts

Upon completion, the proposed project is not expected to result in further impacts to wildlife movement beyond what the project areas currently experience. The proposed project would result in less than significant impact and mitigation is not required.

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

No impact. The proposed project does not violate and local policies or ordinances protecting biological resources.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No impact. The proposed project does not conflict with provisions of an approved local, regional, or state habitat conservation plan.

No impact. The proposed project does not conflict with provisions of an approved local, regional, or state habitat conservation plan.

3.2.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

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

Less Than Significant. The proposed project would occur within the Feather River Historic Highway District. However, it has been determined that the project

would result in no adverse effects to the District or its contributing elements. The proposed retaining wall at location 9 would be consistent with the existing visual environment. As standard practice historic resources located in proximity to construction activities would be designated as Environmentally Sensitive Areas and access would be prohibited during construction. The proposed project would result in less than significant impacts to historical resources and mitigation is not required.

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

No impact. The proposed project would not cause a substantial adverse change in the significance of an archaeological resource. The one pre-historic site located in proximity to construction activities would be designated as an Environmentally Sensitive Area and access would be prohibited during construction.

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

No impact. The presence of human remains has not been identified within the project area. Human remains will not be disturbed by the proposed project.

3.2.6 Energy

CEQA Significance Determinations for Energy

Would the project:

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

No Impact. Proposed project construction would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, and debris hauling. Construction-related energy consumption would be temporary and not a permanent new source of energy demand, and demand for fuel would have no noticeable effect on peak or baseline demands for energy. Upon completion, the project would not increase capacity or provide congestion relief. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy.

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

No impact. The proposed project will not conflict or obstruct a state or local plan for renewable energy or energy efficiency.

3.2.7 Geology and Soils

CEQA Significance Determinations for Geology and Soils

Would the project:

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

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

No impact. The project location is not within close vicinity of any known fault lines

ii) Strong seismic ground shaking?

No impact. The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving due to seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

No impact. The proposed project would restore storm damaged slopes. The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving due to seismic related ground failure, including liquefaction.

iv) Landslides?

No impact. The proposed project would stabilize the embankment between the roadway and the North Fork Feather River.

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

No impact. No soil disturbance will occur at Locations 1 through 8. Location 9 is currently within an area that is completely capped with grouted RSP and pavement. Upon completion, an earthen bench area would remain at this location that would be treated with erosion and sediment control Best Management Practices. Disturbed soil and Location 10, area to be used for temporary stockpiling and staging, would also be treated with erosion and sediment control Best Management Practices. The project would not result in the loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No impact. Geotechnical drilling has been performed and has confirmed the depth to bedrock, as well as the quality of bedrock. The project has been adequately designed to prevent any on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

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

No impact. The project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code.

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

No impact. Soils are capable of supporting the use of septic tanks or alternative waste water disposal systems; however, the proposed project area is confined to State right-of-way. Use of septic tanks or alternative waste water disposal systems are not proposed within the project areas.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No impact. Based on previous environmental studies and construction projects in the area, there is no potential for adverse impacts to paleontological resources.

3.2.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

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

Less than significant. The purpose of this project is to permanently repair of the damaged roadway embankment and protect the highway from slope failure. The project would not increase capacity and would not change travel demands or traffic patterns when compared to the no-build alternative. Therefore, an increase in operational GHG is not anticipated. Construction would generate greenhouse gas emissions, but not at a substantial level. Additionally, if the proposed project is not constructed, the roadway is more prone to a catastrophic event that would require a larger project.

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

No impact. The proposed project will implement measures to reduce construction-related emissions of greenhouse gases and does not violate any plan, policy, or regulation.

3.2.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

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

No impact. The proposed project does not involve 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?

No impact. The proposed project is not expected to 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. Applicable job site management standard practices would be implemented to address spill prevention and control, material and waste management, and disposal activities.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact. The proposed project is not located 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?

No impact. The proposed project is not located on a known hazardous materials site per Government Code Section 65962.5 (Caltrans, 2016c).

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No impact. The project is not located within an airport land use plan or, where such a plan has not been adopted and is not located within two miles of a public airport or public use airport.

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

Less than significant impact. Upon completion, 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. During construction, emergency services would experience traffic control operations. Caltrans would notify and coordinate with applicable agencies to ensure proper function of emergency services. Additionally, the contractor would be required to develop and emergency evacuation plan that outlines the protocol for ensuring the safe evacuation of residents and the traveling public in the event of a fire or other natural disaster. The project would result in less than significant impacts and no mitigation is required.

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

Less than significant impact. Upon completion, the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. During construction, emergency services would experience traffic control operations. Caltrans would notify and coordinate with applicable agencies to ensure proper function of emergency services. Additionally, the contractor would be required to develop and emergency evacuation plan that outlines the protocol for ensuring the safe evacuation of residents and the traveling public in the event of a fire or other natural disaster. The project would result in less than significant impacts and no mitigation is required.

3.2.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

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

Less than significant impact. Upon completion, the proposed project is not anticipated to violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. The project does have the potential to result in minor temporary construction-related impacts to water quality due to project activities (grouted rock slope protection near water bodies, replacing culverts, exposing bare soil), however measures will be taken to ensure water quality standards and waste discharge requirements are maintained. During construction, it is expected that all disturbed soil areas would be adequately stabilized. Implementation of soil erosion and sediment transport Best Management Practices would be implemented to reduce, if not eliminate, potential short-term impacts. This

includes construction and design BMPs and implementation of a Storm Water Prevention Pollution Plan. The project would result in less than significant impacts and no mitigation is required.

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

No impact. The project would not interfere with the ability of the project areas to recharge groundwater beyond what is currently experienced. ..

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site;

Less than significant impact. The proposed project has been designed to prevent any substantial erosion or siltation on- or off-site. The purpose of the proposed project is in part to permanently restore the highway drainage facilities and drainage patterns would not be substantially altered. There will be a small increase in the area of impervious surface as the result of the grouting of rock slope protection along the North Fork Feather River bank. This will not be a substantial change and will be offset by other design changes including planting native vegetation within rock slope protection. During construction, it is expected that all disturbed soil areas would be adequately stabilized. Implementation of soil erosion and sediment transport Best Management Practices would be implemented to reduce, if not eliminate, potential short-term impacts. This includes construction and design BMPs and implementation of a Storm Water Prevention Pollution Plan. The project would result in less than significant impacts and no mitigation is required.

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

Less than significant impact. Drainage features (culverts and inlets) will be replaced and improved at the various project locations. These design changes will route surface waters more effectively, therefore reducing the likelihood of flooding on-site. There will be a small increase in the area of impervious surface as the result of the grouting of rock slope protection along the North Fork Feather River bank. This will not be a substantial change and will be offset by other design changes including planting native vegetation within rock slope protection. Where the tie back retaining wall is being constructed, the North Fork Feather River will be able to accommodate greater river volumes, therefore reducing flow rate and decreasing likelihood of flooding. This is due to the effective increase in cross sectional area of the river channel, created by cutting the working bench into the existing embankment. Off-site flooding is not a concern, as the North Fork Feather River is managed by a series of hydroelectric

dams to create power and prevent flooding. The project would result in less than significant impacts and mitigation is not required.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less than significant. The project would not generate runoff that would substantially contribute to stormwater flows in the North Fork Feather River. Additional runoff will not contribute to any total maximum daily levels of which Caltrans is a Stake Holder in the North Fork Feather River. Proposed drainage improvements have been designed to accommodate existing runoff, in addition to potential future runoff levels as a result of climate change. The project would result in less than significant impacts and mitigation is not required.

iv) Impede or redirect flood flows?

Less than significant impact. The proposed action is intended, in part, to reduce the effects of flood flows on the highway facility. The project would result in less than significant impacts and mitigation is not required.

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

Less than significant impact. The project will involve the construction of concrete and grout structures within the floodplain of the North Fork Feather River. However, the structures will be constructed and cured during the summer season, when risk of flooding is extremely low. When exposed to flood flows, there will be minimal, if any, leaching of pollutants. The project would result in less than significant impacts and mitigation is not required.

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

No impact. The proposed project is not anticipated to permanently impact either surface or ground water quality and will therefore not conflict or obstruct implementation of a plan.

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

No impact. The proposed project is located in a rural area and is confined to the existing maintained Caltrans right-of-way. The project will not physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No impact. Plumas County land use designations for all project areas is General Forest or Timberland Production. Location 4 is adjacent to designated as Resort and Recreational (RR) and location 9 is adjacent to Secondary Suburban Residential (SSR). While nearby these designated areas, the proposed project consists of the restoration or improvement of existing drainage systems and highway protective features; there is no conflict with regard to any applicable land use plan, policy, and or regulation of an agency with jurisdiction over the project.

3.2.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

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

No impact. Proposed drainage conveyance improvements under SR 70 and roadway protective features will not result in the loss of known available mineral resources or mineral recovery sites, as a majority of the project related impacts occur within the existing roadway structure.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No impact. Plumas County has 16,902 records of mining claims on public land, with 1,197 active claims (Diggings, 2019). The Plumas County General Plan identifies prime mining resource production areas and advises that these locations occur where surrounding land use and environmental setting will permit extraction without major adverse environmental impacts. Permits are issued on a case by case administrative review (Plumas County, 1984). Although there is evidence of historic and active mining activities near all project areas, project activities occur within the roadway facility that has already been disturbed and impacts to mineral resources are not anticipated.

3.2.13 Noise

CEQA Significance Determinations for Noise

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact. The proposed project does not construct a new highway in a new location or substantially change the vertical or horizontal alignments and does not include any other activities discussed in the definition of a Type I project. During construction of the project, noise from construction activities may intermittently exceed the noise levels in the immediate area of construction. Noise generated by construction activities would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors.

Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels will vary on a day-to-day basis during each phase of construction depending on the specific task being completed. No adverse noise impacts are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications for noise abatement. The project would result in less than significant impacts and no mitigation is required.

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

Less than significant. Construction is expected to generate groundbourne vibration and noise, however it will be low intensity and infrequent. There are no sensitive receptors or buildings in the nearby vicinity. The project would result in less than significant impacts and no mitigation is required.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The proposed project is not within vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

3.2.14 Population and Housing

CEQA Significance Determinations for Population and Housing

Would the project:

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

No impact. Populated areas along State Route 70 and the North Fork Feather River are characterized as sparse and scattered, with small residential communities including Paxton, Twain, French Bar, Belden, Rogers Flat, Tobin, Rock Creek, and Storrie. Population within the vicinity of the proposed project is sparse. A few residences are located within the vicinity of project areas 4 and 7, and are associated with the Storrie Retreat and Belden, respectively. There are no residences located in project areas 1, 2, 3, 5, 6, 8, 9 and 10. The proposed project consists of improving existing drainage structures under SR 70 and permanently stabilize the roadway embankment within the project limits, and there would be no impact related to population growth, or displacement of housing or people.

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

No impact. The proposed project consists of improving existing drainage structures under State Route 70 and permanently stabilizing the roadway embankment within the project limits. Proposed project activities would occur within existing Caltrans right-of-way, and there would be no impact related to population growth, or displacement of housing or people.

3.2.15 Public Services

CEQA Significance Determinations for Public Services

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

Fire protection?

No impact. The proposed project would not provide new or physically altered governmental facilities nor result in new service populations that would result in the need for new or physically altered governmental facilities.

Police protection?

No significant impact. The proposed project would not provide new or physically altered governmental facilities nor result in new service populations that would result in the need for new or physically altered governmental facilities.

Schools?

No impact. The proposed project would not provide new or physically altered governmental facilities nor result in new service populations that would result in the need for new or physically altered governmental facilities.

Parks?

No impact. The proposed project would not provide new or physically altered governmental facilities nor result in new service populations that would result in the need for new or physically altered governmental facilities..

Other public facilities?

No impact. The proposed project would not provide new or physically altered governmental facilities nor result in new service populations that would result in the need for new or physically altered governmental facilities.

3.2.16 Recreation

CEQA Significance Determinations for Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No impact. The proposed permanent restoration project would not increase the usage of neighborhood parks or the Plumas National Forest. Physical deterioration of these facilities would not occur as a result of the project..

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No impact. The project area may include dispersed recreation activities around the highway facility, but no formal recreation facilities occur within the project limits. There will not be construction or expansion of recreation facilities.

3.2.17 Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

No impact. The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system.

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

No impact. The proposed project would not increase capacity or increase vehicle miles traveled and therefore would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b).

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

No impact. The proposed project would stabilize the roadway embankment and improve drainage facilities within the project limits. The project does not propose modification to roadway geometric design features or incompatible uses.

d) Result in inadequate emergency access?

Less than significant impact. During construction, emergency services would experience traffic control operations. Caltrans would notify and coordinate with applicable agencies to ensure proper emergency access within and through the project sites. Additionally, the contractor would be required to develop and emergency evacuation plan that outlines the protocol for ensuring the safe evacuation of residents and the traveling public in the event of a fire or other natural disaster. The project would result in less than significant impacts and no mitigation is required.

3.2.18 Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

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

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

No impact. Caltrans has consulted with applicable Californian Native American tribes and as of the date of this document has not received notification of the presence or potential presence of tribal cultural places, defined in Public Resource Code section 2107, within project limits. Consultation with Native American Tribes is ongoing and will continue through project completion. The project would not impact Tribal Cultural Resources.

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

No impact. Caltrans has consulted with applicable Californian Native American tribes and as of the date of this document has not received notification of the presence or potential presence of tribal cultural places, defined in Public Resource Code section 2107, within project limits. Consultation with Native American Tribes is ongoing and will continue through project completion. The project would not impact Tribal Cultural Resources.

3.2.19 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

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

Less than significant impact. The proposed project will not require or result in the relocation or construction of new or expanded water, electric power, natural gas, or telecommunication facilities. The project will replace existing culverts at Location 9, in order to construct the tie back retaining wall. This reconstruction will not cause significant environmental effects. The project would result in less than significant impacts and no mitigation is required.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

No impact. The proposed project would not impact water supply utilities.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No impact. The proposed project would not generate any wastewater that will be treated by a management facility.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No impact. The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

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

No impact. The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.2.20 Wildfire

CEQA Significance Determinations for Wildfire

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

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

Less Than Significant impact. The project sites are located within areas classified as very high fire hazard severity zones. However, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. During construction, emergency services would experience traffic control operations. Caltrans would notify and coordinate with applicable agencies to ensure proper function of emergency services. Additionally, the contractor would be required to develop and emergency evacuation plan that outlines the protocol for ensuring the safe evacuation of residents and the traveling public in the event of a fire or other natural disaster. The project would result in less than significant impacts and no mitigation is required.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No impact. The proposed project would not exacerbate wildfire risks and, therefore, would not expose project occupants to pollutant concentrations in the event of wildfire or the uncontrolled spread of a wildfire.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No impact. The proposed project would not require installation or maintenance of infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No impact. The proposed project would not exposure people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage change beyond the current existing facility.

3.2.21 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

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

Less than significant impact. The proposed project would permanently impact waters and riparian habitat within the North Fork Feather River Canyon. However, these areas are minor when considering the habitat of the area as a whole. The project includes planting of riparian vegetation in effort to offset impacts and stabilize the roadway embankment. Additionally, Caltrans would work with regulatory agency staff to ensure appropriate measures are incorporated into the project to offset impacts to habitat. Permanent impacts due to project activates do not have the potential to substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife species 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.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than significant impact. The project’s incremental contribution to environmental impacts is not considered to be cumulatively considerable.

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

Less than significant impact. The proposed project would not cause substantial adverse effects on human beings, either directly or indirectly.

3.3 Wildfire

Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the “CEQA Checklist” for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects “near” these very high fire hazard severity zones.

Affected Environment

The proposed project is located on State Route 70 in the Feather River Canyon in Plumas county. The rugged and steep slopes can vary in vegetation – some areas posing a higher fire risk than others. The project is located within areas classified as very high fire hazard severity zones, however, all project activities are located immediately adjacent to both State Route 70 and the North Fork Feather River.

Environmental Consequences

Although the proposed project is designated as a high risk fire area according to Cal Fire online mapping ([web link to Cal Fire online mapping](#)) the project would not modify or add any components that may exacerbate wildfire risks. Any changes to the nearby landscape would be the conversion of rock slope protection, riparian vegetation, and annual grasses to grouted rock slope protect or the concrete tie back wall. These structures are fire resistant and, in addition to the North Fork Feather River, would likely act as a fire break in the event of a wildfire. The project would result in less than significant impacts and no mitigation is required

Avoidance, Minimization, and/or Mitigation Measures

The contractor would be required to develop and emergency evacuation plan that outlines the protocol for ensuring the safe evacuation of residents and the traveling public in the event of a fire or other natural disaster.

3.4 Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or “mitigate” the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

Regulatory Setting

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

Federal

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

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

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability” (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 United States Code Section 6201) and Corporate Average Fuel Economy (CAFE) Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

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

The U.S. United States Environmental Protection Agency ² in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for [new cars and light-duty vehicles](#) to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. The current standards require vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. United States Environmental Protection Agency and NHTSA are currently considering appropriate mileage and GHG emissions standards for 2022–2025 light-duty vehicles for future rulemaking.

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

State

² United States Environmental Protection Agency's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. United States Environmental Protection Agency's* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. United States Environmental Protection Agency's finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and United States Environmental Protection Agency's assessment of the scientific evidence that form the basis for United States Environmental Protection Agency's regulatory actions (U.S. United States Environmental Protection Agency's 2009).

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders including, but not limited to, the following:

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

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

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

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

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to

implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e).³ Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

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

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles travelled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

Executive Order B-55-18, (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

Environmental Setting

The proposed project is on a section of SR 70 that is a state-designated scenic byway, running through Plumas National Forest parallel to the Feather River Canyon in

³ GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called "carbon dioxide equivalent" (CO₂e). The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.

Plumas County. The route, which is classified as a minor arterial and experiences little congestion, serves small rural communities and tourism and recreational users. Between 1992 and 2015, annual average daily traffic and peak month (August) traffic on SR 70 in the project area (west of the junction with SR 89 to Butte County line) dropped by an average of about 3% each year. Traffic volumes are expected to grow by only about 0.5% annually through 2038, mostly related to tourism and recreational activities. Overall, Plumas County shows a general trend of little growth in population, jobs, and congestion. (PCTC 2018). There is no readily accessible detour or alternative for this segment of SR 70.

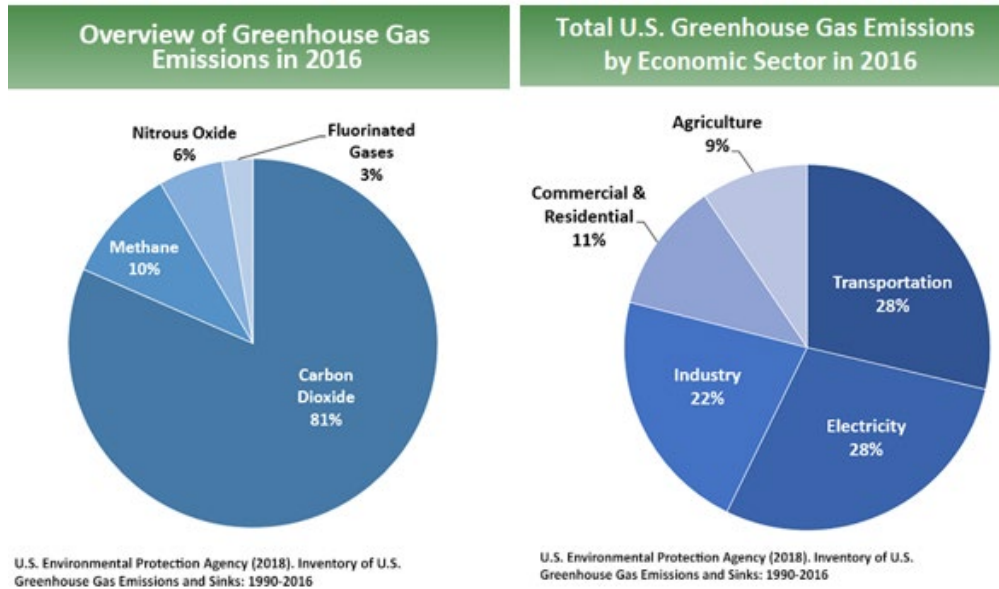
The Plumas County Transportation Commission's (PCTC) 2010 Regional Transportation Plan (RTP) guides transportation development in the project area. The 2010 RTP was adopted on November 21, 2011; a draft Administrative Modification was published in June 2018.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. United States Environmental Protection Agency is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

National GHG Inventory

The United States Environmental Protection Agency prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81% consist of CO₂, 10% are CH₄, and 6% are N₂O; the balance consists of fluorinated gases (United States Environmental Protection Agency 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

Figure 6. U.S. 2016 Greenhouse Gas Emissions



State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO₂e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (ARB 2019a).

Figure 7. California 2017 Greenhouse Gas Emissions

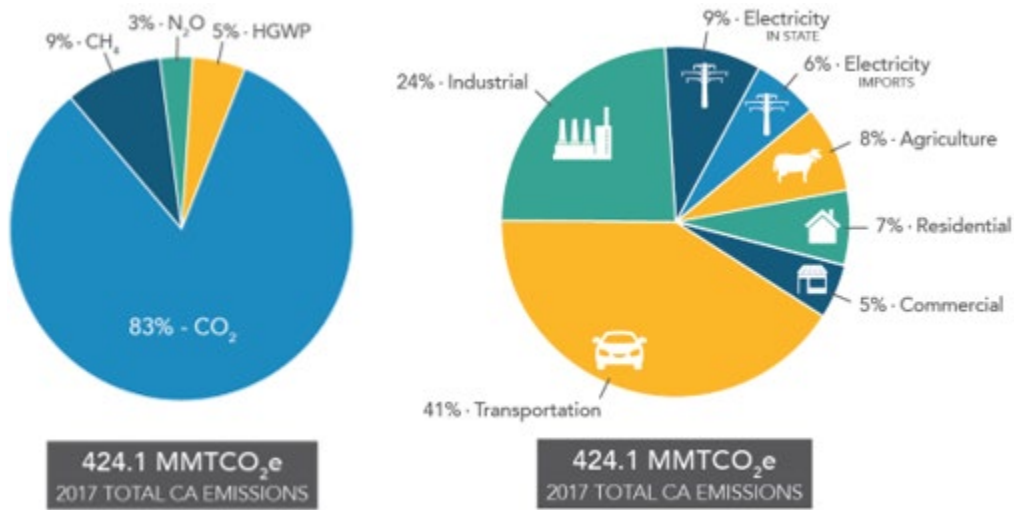
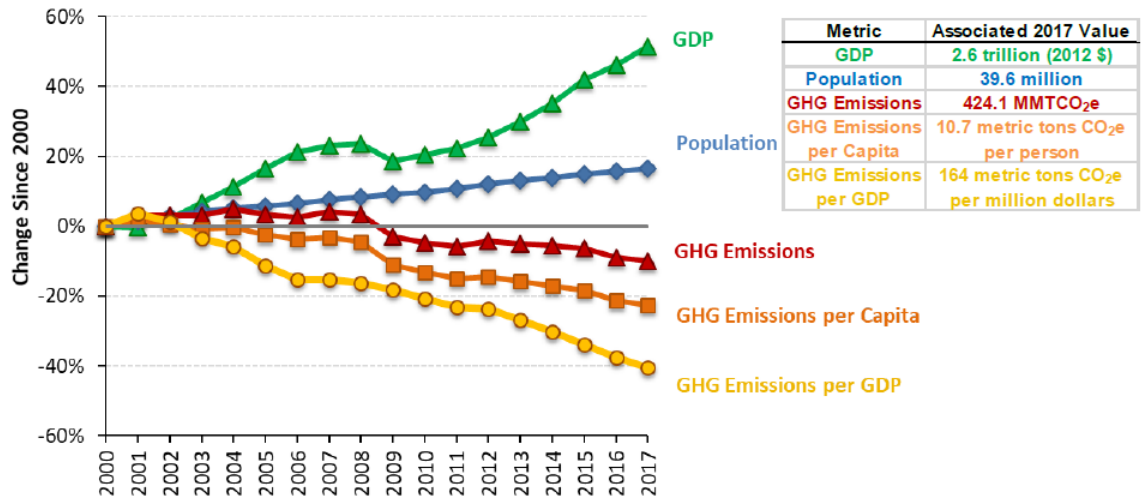


Figure 8. Change In California GDP, Population, and GHG Emissions Since 2000



Source: ARB 2019b

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in Executive Order B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans

As a regional transportation planning agency, the PCTC is not required to develop a sustainable communities strategy and is not assigned GHG reduction goals by ARB. However, the RTP and the Plumas County General Plan both address GHGs in the county. The 2018 Draft RTP Administrative Modification supports strategies that lessen dependence on the automobile, promote shifts to alternative modes of transportation, and maintain environmental compliance. Plumas County has not produced climate action plan.

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH₄ and N₂O are emitted during fuel

combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130)).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of this project is to construct a permanent repair of the damaged roadway embankments and protect the highway from a slip-out slope failure. The project would not increase capacity or vehicle miles traveled, and would not change travel demands or traffic patterns when compared to the no-build alternative. Therefore, an increase in operational GHG is not anticipated. Additionally, there will likely be long term benefits from increased vegetation along the planted rock slope protection embankments of the North Fork Feather River.

Construction Emissions

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

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

Construction is expected to begin in 2021 and last approximately 120 working days. The proposed project would result in generation of short-term construction-related GHG emissions. The CAL-CET2018 (1.2) was used to estimate CO₂, CH₄, N₂O, and HFC emissions from construction activities. Table 6 summarizes estimates of GHG emissions generated by on-site equipment for the project. The carbon dioxide equivalent (CO₂e) produced during construction is estimated to be approximately 512 metric tons.

Table 7. Estimates of GHG emissions during construction (US tons)

Construction Year	CO₂	CH₄	N₂O	HCFs	CO₂e*
2021	356	0.011	0.019	0.015	564
Total	336	0.011	0.019	0.015	564

* A quantity of GHG is expressed as carbon dioxide equivalent (CO₂e) that can be estimated by the sum after multiplying each amount of CO₂, CH₄, N₂O, and HFCs by its global warming potential (GWP). Each GWP of CO₂, CH₄, N₂O, and HFCs is 1, 25, 298, and 14,800, respectively.

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

CEQA Conclusion

The proposed action would permanently restore storm-damaged drainage facilities to working order. Because the proposed project does not increase roadway capacity or VMT, no long-term increase in operational GHG emissions is anticipated. Construction emissions would be minimal, and further reduced by implementing Caltrans Standard Specifications and complying with construction best management practices and all air district rules, regulations, and ordinances for air quality. Accordingly, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for reducing the emissions of greenhouse gas. Therefore, the impact would be less than significant. Additionally, any potential short-term negative impacts associated with construction emissions would be partially offset by the positive long-term effects of planting native vegetation within the rock slope protection embankments.

If the permanent restoration project is not constructed, there is risk that a large storm event could result in catastrophic damage to the already damaged SR 70 facility. If this occurs, Caltrans would likely have to initiate a large scale, emergency opening to return the highway to a good state of repair. Depending on the scale of construction, this could result in a project with a much more substantial emissions of GHGs.

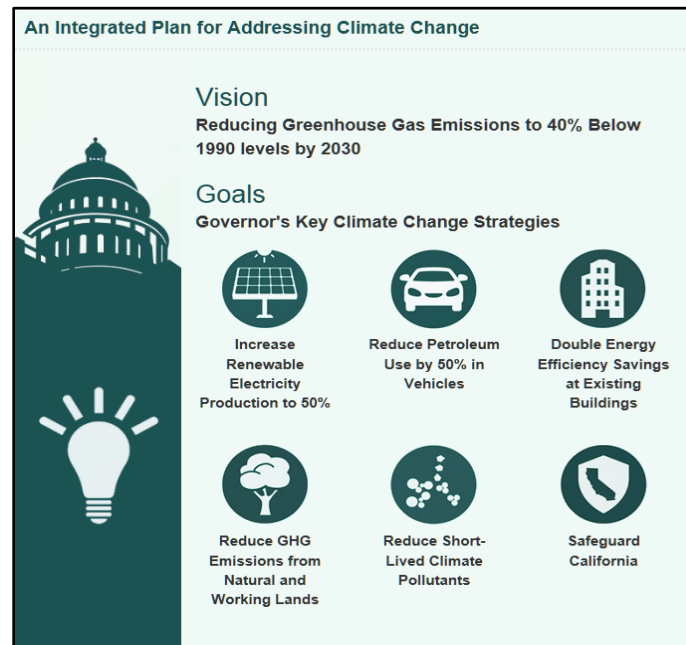
Although GHGs from the proposed project would have a less-than-significant impact on the environment, Caltrans is firmly committed to implementing measures to help further reduce GHG emissions. These measures and strategies are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

Figure 9. California Climate Strategy



The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that

policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Executive Order B-30-15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO₂ reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

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

Caltrans Strategic Management Plan

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

- Increasing percentage of non-auto mode share
- Reducing VMT
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

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

- The contractor must comply with the 2018 Caltrans Standard Specifications in Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including the Northern Sierra Air Quality Management District regulations and local ordinances.
- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling construction vehicles and equipment to no more than 5 minutes.
- Caltrans 2018 Standard Specification 7-1.02C "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board.
- Utilize a traffic management plan to minimize vehicle delays and long periods of vehicle holding.
- Construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- The project will incorporate planting of native vegetation along the embankments between SR 70 and the North Fork Feather River. As vegetation grows, it will serve several functions, including acting as a partial offset to GHG emissions.

Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must 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, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 ([15 U.S.C. ch. 56A § 2921 et seq.](#)). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.” Chapter 12, “Transportation,” presents a key discussion of vulnerability assessments. It notes that “asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime” (USGCRP 2018).

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

FHWA order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

Executive Order S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented

with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

Executive Order S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

Executive Order B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This Executive Order recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of Executive Order B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, [*Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*](#). The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

- Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:
 - *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
 - *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.

- **Prioritization** – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

All projects must consider future climate conditions in the planning and design decisions. Consider timeframe, adaptive capacity, and risk tolerance. Refer to guidance in [*Planning and Investing for a Resilient California: A Guidebook for State Agencies*](#) (Resilient California) for the process of climate risk analysis.

If your district has completed a climate change vulnerability assessment, you may use that information to assess whether your project may be subject to climate change effects. The vulnerability assessments contain information regarding several climate stressors. Include brief information on all the stressors that have been identified.

Consult general plans, land use plans, RTPs, and local climate action plans that may also offer strategies that can be incorporated in specific projects. Reviewing these plans is also necessary to respond to the CEQA question of whether the project conflicts with any adopted plans.

CEQA does not require analysis of effects of climate change on a project. Importantly, however, an environmental document should disclose if a project would *exacerbate* the effects of climate change related to CEQA topics such as flooding, hazards, and wildfire.

Acknowledge that climate-change risk analysis involves uncertainties as to the timing and intensity of potential risks. Uncertainties may be documented in the project risk register. For example, if a protective design feature is not implemented in the project because of cost, the future consequence may be a greater cost (in dollars, time, and lost services) to repair damage. Also consider the risks of project delays if Coastal Commission or other agency permits are delayed because the project does not adequately address coastal impacts.

Sea Level Rise Analysis

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

Floodplains

Climate change and associated high flows in the North Fork Feather River was one of the primary drivers for this project and for selecting the tie back wall alternative at PM 20.58–20.93. The previous rock slope protection embankment between the roadway and the North Fork Feather River at that location encroached into the floodplain, creating high flow velocities and scour energy. By removing the embankment and creating a wall, Caltrans is effectively increasing the cross-sectional area of the river channel. This will allow this reach of the river to accommodate flows during high-intensity events that are expected to occur in the future. With this construction strategy, flood water will have less energy and velocity, and will therefore be less destructive in comparison to other options.

The Caltrans Climate Change Vulnerability Assessment for District 2 (Caltrans 2018) maps an up to 10% increase in 100-year storm precipitation depth in the project area by 2055, and perhaps up to 15% by 2085. This project is specifically designed to protect SR 70 under the future potentially higher flow conditions anticipated with climate change.

Wildfire

SR 70 in the project area traverses Plumas National Forest. This section of highway is mapped as exposed roadway in an area of high or very high wildfire concern in the Caltrans Climate Change Vulnerability Assessment for District 2. CalFire's Fire Hazard Severity Zone viewer shows the project extent to be in a very high fire hazard severity zone. Once completed, the proposed project will not change or exacerbate the risk of wildfire in the future. All project features are on the river side of the highway and consist of nonflammable or fire-resistant materials. During construction, contractors will be required to comply with fire protection specifications of Caltrans 2018 Standard Specification 7-1.02M(2) (as revised October 18, 2019). Those measures include posting the names and phone numbers of fire suppression agencies at the job site; submitting a copy of the Cal/OSHA-required fire prevention plan; immediately reporting fires in and near the job project limits; preventing personnel from setting open fires that are not part of the work; and preventing the escape and extinguishing fires caused directly or indirectly by the work. Project contractors will also coordinate with U.S. Forest Service local office and comply with all their requirements.



Chapter 4 **Comments and Coordination**

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, and Project Development Team (PDT) meetings. This chapter summarizes the results of the Department's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Caltrans has initiated coordination with the United States Forest Service, the California Department of Fish and Wildlife, and the Central Valley Regional Water Quality Control Board throughout the environmental scoping process. Coordinated project location field visits were held throughout 2019 in order to explain the project design and receive any input on environmental impacts. Coordination was continued through electronic mail generally consisting of questions and/or updates on project development. Caltrans will continue to facilitate coordination by supplying the aforementioned agencies with copies of this Draft Environmental Document and will respond to pertinent any comments/concerns during the commenting period.

Caltrans Cultural staff have initiated contact with Estom Yumeka Maidu Tribe of the Enterprise Rancheria, Greenville Rancheria of Maidu Indians, Honey Lake Maidu, Maidu Summit Consortium, Mooretown Rancheria of Maidu Indians, Susanville Indian Rancheria, Tsi Akim Maidu, Washoe Tribe of Nevada and California via mail on June 24th, 2019. Greenville Rancheria responded on August 12th, 2019 and did not have any comment at the time. Additionally, Cultural Staff made an initial request to the Native American Heritage Commission concerning the project. The Commission responded without any concerns. Caltrans will continue to facilitate Coordination with the appropriate Native American Tribes and Organizations throughout the project process.

Caltrans will provide residents in the Project vicinity with the ability to access the Draft Environmental Document and make comments on the project, per CEQA. Caltrans will take comments and/or concerns into consideration when developing the Final Environmental Document and may coordinate with persons/groups as necessary. Announcements of the Draft Environmental Document and comment period will be provided in the local newspapers.



Chapter 5 List of Preparers

The following Caltrans North Region and District 2 staff contributed to the preparation of this Initial Study/Environmental Assessment:

Stacey Barnes, Caltrans Transportation Engineer (Project Management). Contribution: Project Manager

Erin Chiniewicz, Caltrans Associate Environmental Planner (Archeology). Contribution: Historic Property Survey Report

Youngil Cho, Caltrans Associate Environmental Planner. Contribution: Air Quality and Noise

Davis Crane, Caltrans Environmental Planner. Contribution: Environmental Coordinator and IS/EA document preparation

Karl Harris, Caltrans Transportation Engineering Technician. Contribution: Project Design and Hydraulics

Chuck Lees, Caltrans Transportation Engineer (Civil). Contribution: Project Engineer, Hydraulics, and Floodplain Evaluation

Mark Melani, Caltrans Associate Environmental Planner, Hazardous Materials Specialist. Contribution: Initial Site Assessment

Brenda Powell-Jones, Caltrans Senior Environmental Planner, Climate Change Policy Advisor. Contribution: Greenhouse Gas

Emiliano Pro, Caltrans Senior Environmental Planner. Contribution: Document Review and Coordination

Nathan Roberts, Caltrans Associate Environmental Planner (Architectural Historian). Contribution: Finding of No Adverse Effect Report

Robin Solari, Caltrans Landscape Architect. Contribution: Visual Impact Assessment (VIA)

Chelsea Tran-Wong, Caltrans Associate Environmental Planner (Natural Sciences). Contribution: Project Biologist and Natural Environmental Study Document

Miguel Villicana, Caltrans Transportation Engineer (Civil), NPDES Coordinator. Contribution: Water Quality Assessment



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Appendix A VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

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*Making Conservation
a California Way of Life.*

April 2018

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

A handwritten signature in blue ink, appearing to read "Laurie Berman".

LAURIE BERMAN
Director

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



Appendix B Avoidance, Minimization and/or Mitigation Summary

To ensure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] that follows) would be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Because the following Environmental Commitments Record is a draft, some fields have not been completed; they will be filled out as each of the measures is implemented.

Note: Some measures may apply to more than one resource area. Duplicated or redundant measures have not been included in this Environmental Commitments Record.

Avoidance/Minimization Measures

Parks and Recreation

- Pedestrian and bicycle access along SR 70 must be maintained during construction.
- The Contractor would be required to minimize any access delays to driveways or public roadways within or near the work zones.

Traffic and Transportation/Pedestrian and Bicycle Facilities

- Pedestrian and bicycle access along SR 70 must be maintained during construction.
- Lane closures on SR 70 will not be allowed when traffic volumes exceed the carrying capacity of approximately 900 vehicles per lane.
- The Contractor would be required to minimize any access delays to driveways or public roadways within or near the work zones.
- Portable Changeable Message S0069gns will be required for this project.

Visual/Aesthetics

- The project will utilize existing rock and boulders from on-site to stabilize the damaged embankments. Voids between the rocks will be filled with grout and/or planted with native vegetation.
- Tarps and plywood will be utilized to shield grout from spraying onto adjacent boulder surfaces and protect the river.
- Architectural treatments will be incorporated into the retaining wall at Location 9 to emulate the existing visual environment
- Most construction staging will be located in established pullouts adjacent to the individual work sites. Access will be from the roadway.

Cultural Resources

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Erin Dwyer, District Environmental Branch, at (530) 741-4538, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.
- Adverse effects to the Feather River Historic Highway District will be avoided by ensuring that the work will meet the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.
- Prior to beginning of work, the Caltrans Archeologist and Architectural Historian shall ensure that the boundaries of the Environmentally Sensitive Areas for each cultural resource are clearly described and illustrated in the project plans prepared to guide the construction of the project.

Hydrology and Floodplain

- The project would comply with the requirements prescribed in Caltrans Statewide NPDES Permit.
- The requirements of Construction General Permit No. CAS000002 (Order No. 2009-0009-DWQ, as amended) for General Construction Activities are applicable to the project since the total disturbed soil area (DSA) is equal to or greater than 1.0 acre.
- A Caltrans approved Storm Water Pollution Prevention Plan (SWPPP) would be required.
- A Contractor prepared SWPPP would incorporate appropriate temporary construction site BMPs to implement effective handling, storage, use and disposal practices during construction activities.
- Existing drainage facilities would be identified and protected by the application of appropriate construction site BMPs.
- Caltrans shall implement the programs specified in its approved Storm Water Management Plan. Caltrans NPDES office will participate in early project design consultation with the Regional Board. Coordination with Regional Board staff shall be conducted through the District NPDES Coordinator.

Water Quality and Stormwater Runoff

- All construction site BMPs will follow the latest Stormwater Quality Handbook edition.
- Before any ground-disturbing activities, the contractor will be required to prepare a SWPPP that includes erosion and sediment control, and construction waste containment measures for protecting receiving waters.

Hazardous Waste

- SSP 14-11.10 is required for Naturally Occurring Asbestos (NOA)
- SSP 36-4 is required if the yellow or white thermoplastic and/or paint striping would be removed while grinding the entire pavement surface.

Air Quality

- The construction contractor must comply with the 2018 Caltrans Standard Specifications in Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including the Northern Sierra Air Quality Management District regulations and local ordinances.

- Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.
- A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Equipment and materials storage sites will be located as far away from residential uses as practicable. Construction areas will be kept clean and orderly.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
- All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce PM emissions.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

Noise

- Control and monitor noise resulting from work activities.
- Do not exceed 86 dBA Lmax at 50 feet from the job site from 9 p.m. to 6 a.m.
- Limit operation of pile driver, jackhammer, concrete saw, pneumatic tools, and demolition equipment to daytime hours.
- Unnecessary idling of internal combustion engines should be prohibited.
- Stationary equipment, such as compressors and generators, should be located as far away from residential users as practical.
- Locate equipment and materials storage sites as far away from residential users as practicable.

Natural Communities

- For the construction of the tie back wall, the contractor will be required to contain all excavation and construction debris within the wall excavation limits and collect all existing concreted rock slope protection removed from the embankment. Containment will be maintained along the entire wall construction to catch debris and prevent it from entering the Feather River. Prior to the employment of the catchment device, the contractor shall prepare and submit an Excavation Plan for review and approval by Caltrans. This plan shall include the contractor's strategy for safe containment of the excavated material.
- For the replacement of culverts and their associated end treatments, work shall take place during summer low flows.
- If necessary, all work areas will be dewatered (i.e., TCDS) prior to starting work to minimize potential impacts to water quality in adjacent aquatic habitat.
- If necessary, the contractor shall prepare and submit a TCDS plan for review and approval by Caltrans.
- Newly installed drop inlets will have an access culvert on one side to serve as an entry or exit point for frog and other aquatic organism.
- The tie back retaining wall concrete laggings that are directly below the culverts will have raised texture features (similar to natural boulder faces).
- The culvert outlets will be made flush with the tie back wall.
- The bench features will have "plunge pools" constructed directly below the outlets to allow drainage waters to pond. Meandering, rock-lined channels will also be constructed from the plunge pools to the North Fork Feather River.
- All disturbed areas will be treated for erosion control and will be restored and/or revegetated upon project completion to prevent future erosion into waters.
- Vegetation will be removed or trimmed outside of the bird nesting season (i.e., removal will occur between October 1 and January 31).
- If it is not practicable to remove vegetation outside of the bird nesting season, the following guidelines will be executed:
 - Vegetation (i.e., tree, shrub, ground cover) surveys will be conducted no earlier than three days prior to construction by a qualified biologist supplied by the contractor to identify if special status birds are nesting within the project limits.
 - If special status bird nests are found during pre-construction surveys:
 - The areas will be marked as environmentally sensitive and nests will be monitored by a qualified biologist supplied by the contractor for disturbance during construction; and

- Buffer areas will be delineated around areas with active nests, and bird-disturbing construction activities within the buffer area will not occur.
- Vegetation removal will not exceed the minimum necessary to complete the project activities.
- Woody vegetation in riparian areas that are subject to temporary impacts will be trimmed instead of completely removed to promote rapid regrowth.
- Whenever possible, efforts shall be made also to leave root system intact by cutting below ground level to encourage regeneration of riparian vegetation following construction.
- Musk monkey flowers occurring at roadside ditch between PM 20.74 and PM 20.81 and at Culvert #6 located at PM 20.84 are expected to be protected in place. However, if impacts are unavoidable, they can be salvaged.
 - The musk monkey flowers will be collected prior to construction and kept alive during construction. The plants will be replanted in the area immediately following construction.
- The bench feature will be vegetated with native plant species to provide shade and “cold-water refugia” for aquatic organisms in the habitat area

Wetlands and Other Waters

Avoidance and minimization for waters resources are summarized in the previous section Natural Communities.

Plant Species

No avoidance and minimization efforts are proposed.

Animal Species

Foothill Yellow-Legged Frog

Refer to Natural Communities for a list of standard specifications, special provisions, and BMPs that will be implemented for this project to protect Foothill Yellow-Legged Frogs. In addition:

- Replacement and upsizing of existing culverts will be conducted outside of the Foothill Yellow-Legged Frog breeding period (i.e. replacement and upsizing will occur between June 15 and October 15).

Hardhead

Refer to Natural Communities for a list of standard specifications, special provisions, and BMPs that will be implemented for this project to protect hardhead.

Threatened and Endangered Species

Sierra Nevada Yellow-Legged Frog

Refer to subsection 2.3.1: Waters Avoidance and Minimization Efforts for a list of standard specifications, special provisions, and BMPs that will be implemented for this project to protect Sierra Nevada yellow-legged frogs.

Provisions for other species are not required.

Invasive Species

- Preserve and protect existing vegetation not to be removed. Preserve and protect existing vegetation in accordance with CSBMP Manual, Section 3: BMP SS-2. Disturbance or removal of existing vegetation shall not exceed the minimum necessary to complete the project.
- Clean or wash vehicles and equipment before entering and leaving the job site. Cleaning operations shall follow the guidelines described in this section.
- Use the guidelines described in this section to prevent the introduction and the spread of invasive species to and from the job site.
- Following construction, all disturbed soil areas will be stabilized with erosion control measures, and erosion control materials such as straw and seed mixes will be certified weed-free.
- Plans will show plant species that will be used for erosion control. They will consist of native species or non-persistent hybrids that will prevent invasive species from colonizing disturbed areas.
- Straw must be certified weed free under the Department of Food and Agriculture. Straw must be free of plastic, glass, metal, rocks, and refuse or other deleterious material.
- Seed must not contain:
 - Prohibited noxious weed seed
 - More than 1.0 percent total weed seed by weight

Mitigation Measures

Natural Communities

- Caltrans would work with regulatory agency staff during the permitting phase to ensure any impacts to riparian resources are appropriately offset by mitigation efforts



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Scientific Name	Common Name	Status Federal/State/CNPS	Other Status	Habitat	Habitat Present/Absent	Impact and Rationale
<i>Agrostis hendersonii</i>	Henderson's bent grass	--/--/3.2	USFS_WL-Watch List	Valley and foothill grassland, vernal pools. Moist places in grassland or vernal pool habitat. 65-1030 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
<i>Allium jepsonii</i>	Jepson's onion	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Chaparral, cismontane woodland, lower montane coniferous forest. On serpentine soils in Sierra foothills, volcanic soil on Table Mtn. On slopes and flats; usually in an open area. 355-1130 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
<i>Allium sanbornii</i> var. <i>sanbornii</i>	Sanborn's onion	--/--/4.2	USFS_WL-Watch List	Chaparral, cismontane woodland, lower montane coniferous forest. Usually on serpentine outcrops. 260-1510 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
<i>Anomobryum julaceum</i>	slender silver moss	--/--/4.2		Broad-leafed 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.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
<i>Anomobryum julaceum</i>	slender silver moss	--/--/4.2	USFS_WL-Watch List	Broad-leafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in

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				substrates. Usually seen on roadcuts. 100-1000 m.		Plumas County. Therefore, the species will not be impacted by the proposed project.
Arctostaphylos mewukka ssp. truei	True's manzanita	--/--/4.2		Chaparral, lower montane coniferous forest. 425-1390 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 8.68, 10.00, 16.69, and 29.76, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Arnica fulgens	hillside arnica	--/--/2B.2	USFS_WL-Watch List	Great Basin scrub, lower montane coniferous forest, meadows and seeps. Open, damp depressions and meadows in sagebrush scrub or juniper woodland. 1310-2195 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Artemisia tripartita ssp. tripartita	threetip sagebrush	--/--/2B.3	USFS_WL-Watch List	Upper montane coniferous forest. Openings in the forest. Rocky, volcanic soils. 2285-2440 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Aspidotis carlotta-halliae	Carlotta Hall's lace fern	--/--/4.2		Chaparral, cismontane woodland. Generally serpentine slopes, crevices, or outcrops. 100-1400 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Astragalus lemmonii	Lemmon's milk-vetch	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Great Basin scrub, meadows and seeps, marshes and swamps. Lakeshores, meadows and seeps. 1005-2865 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Astragalus lentiformis	lens-pod milk-vetch	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Great Basin scrub, lower montane coniferous forest. Shallow, volcanic soils among sagebrush, sometimes with Jeffrey pine. 1475-1940 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Astragalus pulsiferae var. coronensis	Modoc Plateau milk-vetch	--/--/4.2	USFS_S-Sensitive	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. In sandy silt, friable surface, hard-packed beneath, among basalt cobble; volcanic substrate. 1345-1890 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Astragalus pulsiferae var. pulsiferae	Pulsifer's milk-vetch	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Usually granitic substrate, sandy or rocky, often with pines or sagebrush. 1145-1860 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Astragalus webberi	Webber's milk-vetch	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest, broad-leaved upland forest, meadows and seeps. Open brushy slopes and flats in xeric pine forest or mixed pine-oak forest. 725-1220 m.	A	Although project limits at PMs 16.69 and 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Astragalus whitneyi var. lenophyllus	woolly-leaved milk-vetch	--/--/4.3	USFS_WL-Watch List	Alpine boulder and rock fields, subalpine coniferous forest. Rocky sites. 2135-3050 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the

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						species is not anticipated to be found within the area of disturbances.
Balsamorhiza macrolepis	big-scale balsamroot	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. 35-1465 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Betula glandulosa	dwarf resin birch	--/--/2B.2		Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, subalpine coniferous forest. Mesic sites. 1300-2300 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Boechera constancei	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. 910-1985 m.	A	Although project limits at PM 20.58 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Botrychium ascendens	upswept moonwort	--/--/2B.3	USFS_S-Sensitive	Lower montane coniferous forest, meadows and seeps. Grassy fields, coniferous woods near springs and creeks. 1115-3265 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Botrychium crenulatum	scalloped moonwort	--/--/2B.2	USFS_S-Sensitive	Bogs and fens, meadows and seeps, upper montane coniferous forest, lower montane coniferous forest, marshes	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable

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				and swamps. Moist meadows, freshwater marsh, and near creeks. 1185-3110 m.		habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Botrychium lunaria	common moonwort	--/--/2B.3	USFS_S-Sensitive	Meadows and seeps, subalpine coniferous forest, upper montane coniferous forest. 1950-3415 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Botrychium minganense	Mingan moonwort	--/--/2B.2	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, bogs and fens, meadows and seeps. Creekbanks in mixed conifer forest. 1190-3295 m.	A	Although project limits fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Botrychium montanum	western goblin	--/--/2B.1	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, meadows and seeps. Creekbanks in old-growth forest. 1430-2430 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Botrychium pinnatum	northwestern moonwort	--/--/2B.3	USFS_S-Sensitive	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Creekbanks. 1645-2045 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Botrychium simplex var. compositum	Yosemite moonwort	--/--/	USFS_WL-Watch List	Common in moist meadows over granite, occasionally in soft water seeps, marshes. 1500--3800 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Brodiaea sierrae	Sierra foothills brodiaea	--/--/4.3		Chaparral, cismontane woodland. Usually on gabbro or serpentine. Occasionally on other soil types where conditions limit cover of other plants. 50-945 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Bruchia bolanderi	Bolander's bruchia	--/--/4.2	USFS_S-Sensitive	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Moss which grows on damp clay soils. Seems to colonize bare soil along streambanks, meadows, fens and springs. This species has an ephemeral nature and is disturbance adapted. 1610-3340 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Bulbostylis capillaris	thread-leaved beakseed	--/--/4.2	USFS_WL-Watch List	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. 395-2075 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Buxbaumia viridis	buxbaumia moss	--/--/2B.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, subalpine coniferous forest. Well-rotted logs and in peaty soil and humus. 975-2200 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the

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						species is not anticipated to be found within the area of disturbances.
Calycadenia oppositifolia	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.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	--/--/4.2	USFS_WL-Watch List	Chaparral, lower montane coniferous forest, valley and foothill grassland. Dry, mostly open slopes. Rocky substrates. 105-1645 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	--/--/1B.2	USFS_WL-Watch List	Chaparral, lower montane coniferous forest. Serpentine outcrops and gravelly serpentine talus. 300-950 m.	A	Although project limits at PMs at 8.68, 10.00, and 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex buxbaumii	Buxbaum's sedge	--/--/4.2		Bogs and fens, meadows and seeps, marshes and swamps. Mesic sites. 3-3300 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex cyrtostachya	Sierra arching sedge	--/--/1B.2	USFS_WL-Watch List	Lower montane coniferous forest, riparian forest, marshes and swamps, meadows and seeps. Mesic sites. 605-1390 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations

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						have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex geyeri	Geyer's sedge	--/--/4.2		Lower montane coniferous forest, Great Basin scrub. Volcanic substrate; open forests and slopes. 1155-2100 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex lasiocarpa	woolly-fruited sedge	--/--/2B.3	USFS_WL-Watch List	Bogs and fens, marshes and swamps. Sphagnum bogs, freshwater marsh, lake margins. 600-1965 m.	A	Although project limits at PM 20.58 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex limosa	mud or shore sedge	--/--/2B.2	USFS_WL-Watch List	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. 1370-2790 m.	A	Although project limits at PMs 3.44, 4.34, 5.21, 8.68, 10.00, and 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex petasata	Liddon's sedge	--/--/2B.3	USFS_WL-Watch List	Broadleafed upland forest, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland. 835-3030 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex scabriuscula	Siskiyou sedge	--/--/4.3	SB_BerryS B-Berry Seed Bank	Lower montane coniferous forest, upper montane coniferous forest, meadows and seeps. Mesic sites;	A	Although project limits at PMs 3.44, 4.34, 5.21, 16.69 and 20.58 fall within the species' known range, suitable habitat is not present. No known observations have been reported

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			USFS_WL-Watch List	sometimes in serpentine seeps. 710-2345 m.		near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex scoparia var. scoparia	pointed broom sedge	--/--/2A	USFS_WL-Watch List	Great Basin scrub. Wet, open places. 1219 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex sheldonii	Sheldon's sedge	--/--/2B.2	USFS_WL-Watch List	Lower montane coniferous forest, marshes and swamps, riparian scrub. Mesic sites; along creeks and in wet meadows. 1070-1985 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Carex xerophila	chaparral sedge	--/--/1B.2	USFS_WL-Watch List	Chaparral, cismontane woodland, lower montane coniferous forest. Serpentine, gabbroic. 275-770 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Caulanthus major var. nevadensis	Nevada jewelflower	--/--/4.3	USFS_WL-Watch List	Pinyon and juniper woodland. Often in rocky sites. 1500-2500 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Chenopodium simplex	large-seeded goosefoot	--/--/4.3	USFS_WL-Watch List	Pinyon and juniper woodland, lower montane coniferous forest. Limestone; disturbed or open places. 1400-2400 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations

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						have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Clarkia biloba ssp. brandegeae	Brandegee's clarkia	--/--/4.2	BLM_S- Sensitive	Chaparral, cismontane woodland, lower montane coniferous forest. Often in roadcuts. 75-915 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Clarkia gracilis ssp. albicaulis	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. 210-1100 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Clarkia mildrediae ssp. lutescens	golden- anthered clarkia	--/--/4.2	USFS_WL- Watch List	Cismontane woodland, lower montane coniferous forest. Often in roadcuts. Rocky sites. 275-1750 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 3.44, 4.34, and 5.21, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	--/--/1B.3	BLM_S- Sensitive USFS_S- Sensitive	Cismontane woodland, lower montane coniferous forest. On decomposed granite; sometimes on roadsides. 275- 1730 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 3.44, 4.34, 5.21, 8.68, 10.00, and 16.69, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.

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Clarkia mosquinii	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. 215-1480 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Claytonia palustris	marsh claytonia	--/--/4.3	USFS_WL- Watch List	Meadows and seeps, marshes and swamps, upper montane coniferous forest. Sunny areas in meadows, marshy slopes, and streamside veg. Known from two disjunct regions. 1000-2500 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Claytonia umbellata	Great Basin claytonia	--/--/2B.3	USFS_WL- Watch List	Subalpine coniferous forest. Talus slopes, stony flats, crevices. 1290-3475 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Corallorhiza trifida	northern coralroot	--/--/2B.1	USFS_WL- Watch List	Lower montane coniferous forest, meadows and seeps. Wet, open to shaded, generally coniferous forest. In California, under firs, in partial shade. 1215-1740 m.	A	Although project limits at PMs 3.44, 4.34, and 5.21 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Cypripedium californicum	California lady's- slipper	--/--/4.2	USFS_WL- Watch List	Lower montane coniferous forest, bogs and fens. In perennial seepages on serpentine substrate and in gravel along creek margins. 30-2750 m.	A	Although project limits at PMs 16.69 and 20.58 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Cypripedium fasciculatum	clustered lady's-slipper	--/--/4.2	BLM_S-Sensitive USFS_S-Sensitive	North coast coniferous forest, lower montane coniferous forest. In serpentine seeps and on moist streambanks. 100-2435 m.	A	Although project limits at PMs 3.44, 4.34, 5.21, 8.68, 10.00, 16.69, 20.58, and 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Cypripedium montanum	mountain lady's-slipper	--/--/4.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest, broadleafed upland forest, cismontane woodland, north coast coniferous forest. On dry, undisturbed slopes. 185-2225 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Darlingtonia californica	California pitcherplant	--/--/4.2	SB_RSABG -Rancho Santa Ana Botanic Garden USFS_WL-Watch List	Bogs and fens, meadows and seeps. On ultramafic soils.	A	Although project limits at PMs 3.44, 4.34, 5.21, 16.69, 20.58, and 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Dendrocollybia racemosa	branched collybia	--/--/--	USFS_S-Sensitive	Solitary or in small groups growing from a grain-like sclerotium on the decayed remains of decayed mushrooms, or in duff of mixed hardwood-conifer woods; fruiting from late fall to mid-winter.	A	Although project limits fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Didymodon norrisii	Norris's beard-moss	--/--/	USFS_WL-Watch List	Rock, outcrops, calcareous and volcanic boulders, fields, cliffs, runoff areas; low to moderate elevations. 200-1500 m.	A	Although project limits fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Diplacus pygmaeus	Egg Lake monkeyflower	--/--/4.2	USFS_WL-Watch List	Great Basin scrub, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland. Damp sites in meadows, along streams and on muddy soil of dessicating pools. Volcanic, clay soils. 500-1840 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Drosera rotundifolia	round-leaved sundew	--/--/	USFS_WL-Watch List	Swamps, wet meadows, forests, peatlands, often with Sphagnum. < 2700 m.	A	Although project limits at PMs 3.44, 4.34, and 5.21 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Eleocharis torticulmis	California twisted spikerush	--/--/1B.3	USFS_S-Sensitive	Bogs and fens, meadows and seeps, lower montane coniferous forest. 1095-1180 m.	A	Although project limits at PMs 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Epilobium luteum	yellow willowherb	--/--/2B.3	USFS_WL-Watch List	Lower montane coniferous forest, meadows and seeps. Along streams and in seeps. 1580-2195 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Eremogone cliftonii	Clifton's eremogone	--/--/1B.3	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, chaparral. Openings; granitic and ultramafic substrates. 475-2080 m.	A	Although project limits at PMs 0.06, 3.44, 4.34, 5.21, and 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Erigeron eatonii var. nevadincola	Nevada daisy	--/--/2B.3	USFS_WL-Watch List	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Rocky sites. 1400-1950 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Erigeron lassenianus var. deficiens	Plumas rayless daisy	--/--/1B.3	USFS_WL-Watch List	Lower montane coniferous forest. Gravelly, open sites. Sometimes on serpentine; sometimes on disturbed sites. 1355-1985 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Erigeron petrophilus var. sierrensis	northern Sierra daisy	--/--/4.3	USFS_WL-Watch List	Lower montane coniferous forest, upper montane coniferous forest, cismontane woodland. Rocky foothills to montane forest, sometimes on serpentine. 300-2075 m.	A	Although project limits at PMs 0.06, 16.69, and 20.58 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Erigeron reductus var. reductus	California rayless daisy	--/--/	USFS_WL-Watch List	Crevices and open, rocky sites, commonly on serpentine. 700–2400 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Eriogonum microthecum var. schoolcraftii	Schoolcraft's wild buckwheat	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Pinyon and juniper woodland, Great Basin scrub. Sandy to rocky substrates. 1315-1700 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Eriogonum umbellatum var. ahartii	Ahart's buckwheat	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Cismontane woodland, chaparral. Serpentine. On slopes, in openings. 275-1480 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Erythranthe filicifolia	fern-leaved monkeyflower	--/--/1B.2	USFS_WL-Watch List	Chaparral, lower montane coniferous forest, meadows and seeps. Usually slow-draining, ephemeral seeps among exfoliating granitic slabs. 415-1710 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 8.68 and 10.00, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Erythranthe glaucescens	shield-bracted monkeyflower	--/--/4.3	USFS_WL-Watch List	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Wet places, often in rock crevices, and in serpentine seeps. 60-1240 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Erythranthe percaulis	Serpentine Canyon monkeyflower	--/--/1B.1		Chaparral, lower montane coniferous forest. Serpentine. Among boulders and in soil pockets on wet cliffs and slopes, seeps, roadsides. 780-855 m.	A	Although project limits at PMs 16.69, and 20.58 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Fissidens aphelotaxifolius	brook pocket moss	--/--/2B.2	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest. Moss growing on rocks in stream channels and waterfalls; also, in splash zones. 2000-2200 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Fissidens pauperculus	minute pocket moss	--/--/1B.2	USFS_S-Sensitive	North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on-stream banks. 10-1024 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in

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						Plumas County. Therefore, the species will not be impacted by the proposed project.
Frangula purshiana ssp. ultramafica	Caribou coffeeberry	--/--/1B.2	USFS_S-Sensitive	Lower montane coniferous forest, upper montane coniferous forest, chaparral, meadows and seeps. On serpentine. 725-1830 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 3.44, 4.34, 5.21, 16.69, and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Fritillaria eastwoodiae	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. 550-1475 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Helodium blandowii	Blandow's bog moss	--/--/2B.3	USFS_S-Sensitive	Meadows and seeps, subalpine coniferous forest. Moss growing on damp soil, especially under willows among leaf litter. 1862-2700 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Hemieva ranunculifolia	buttercup-leaf suksdorfia	--/--/2B.2	USFS_WL-Watch List	Upper montane coniferous forest, meadows and seeps. Mesic sites; rocky. 1825-2075 m.	A	Although project limits at PMs 3.44, 4.34, and 5.21 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Hesperocypar is bakeri	Baker cypress	--/--/4.2	SB_KewBG -Kew Royal Botanic Gardens SB_RSABG -Rancho Santa Ana Botanic Garden SB_USDA- US Dept of Agriculture USFS_WL- Watch List	Lower montane coniferous forest, chaparral. Mixed-evergreen forests, open slopes, flats, on serpentine or volcanic substrates. 820-1995 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Hesperocypar is macnabiana	MacNab's cypress	--/--/	USFS_WL- Watch List	Dry slopes, flats, chaparral, pine/oak woodland, often on serpentine. 300-- 1460 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Ivesia aperta var. aperta	Sierra Valley ivesia	--/--/1B.2	BLM_S- Sensitive USFS_S- Sensitive	Great Basin scrub, pinyon and juniper woodland, lower montane coniferous forest, meadows and seeps. Usually in loamy soils derived from volcanics. Grassy areas w/in sagebrush scrub or other communities. 1480-1985 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Ivesia baileyi var. baileyi	Bailey's ivesia	--/--/2B.3	USFS_WL- Watch List	Lower montane coniferous forest, Great Basin scrub. Crevices in volcanic rock cliffs and on rock outcrops. 1340- 2530 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Ivesia sericoleuca	Plumas ivesia	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Vernal mesic areas; usually volcanic substrates. 1315-2135 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Ivesia webberi	Webber's ivesia	T/--/1B.1	BLM_S-Sensitive USFS_S-Sensitive	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Rocky or gravelly volcanic soils. 1035-1920 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Juncus dudleyi	Dudley's slender rush	--/--/2B.3	USFS_WL-Watch List	Lower montane coniferous forest (mesic). Wet areas in forest. 455-1910 m.	A	Although project limits at PMs 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Juncus luciensis	Santa Lucia dwarf rush	--/--/1B.2	USFS_S-Sensitive	Vernal pools, meadows and seeps, lower montane coniferous forest, chaparral, Great Basin scrub. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 280-2035 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Lewisia cantelovii	Cantelow's lewisia	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Broadleaved 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. 325-1375 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 8.68, 10.00, 16.69, and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys,

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						and no known observations have been reported near the ESL.
Lewisia kelloggii ssp. hutchisonii	Hutchison's lewisia	--/--/3.2	USFS_S-Sensitive	Upper montane coniferous forest. On slate; in openings and on ridgetops. Sometimes on rhyolite tuff. 765-2365 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Lewisia kelloggii ssp. kelloggii	Kellogg's lewisia	--/--/3.2	USFS_S-Sensitive	Upper montane coniferous forest. Often on slate, sometimes rhyolite tuff. In openings, on ridgetops. 1465-2365 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Lilium humboldtii ssp. humboldtii	Humboldt lily	--/--/4.2	USFS_WL-Watch List	Chaparral, lower montane coniferous forest, cismontane woodland. Yellow-pine forest, openings or open forest. 90-1280 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Lomatium foeniculaceum ssp. macdougalii	Macdougal's lomatium	--/--/2B.2	USFS_WL-Watch List	Chenopod scrub, Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Volcanic soil. 1215-2205 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Lomatium roseanum	adobe lomatium	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest, Great Basin scrub. Rocky, gravelly openings. 1790-2255 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the

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						species is not anticipated to be found within the area of disturbances.
Lupinus dalesiae	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.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 3.44, 4.34, 5.21, 16.69, and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Lycopus uniflorus	northern bugleweed	--/--/4.3	USFS_WL-Watch List	Bogs and fens, marshes and swamps. Wet places. 5-2000 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Meesia triquetra	three-ranked hump moss	--/--/4.2	USFS_WL-Watch List	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.	A	Although project limits at PMs 3.44, 4.34, 5.21, and 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Meesia uliginosa	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. 1095-2805 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Mielichhoferi a elongata	elongate copper moss	--/--/4.3	USFS_S-Sensitive	Cismontane woodland. Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates naturally	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations

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				enriched with heavy metals (e.g. copper). 500-1300 m.		have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Monardella follettii	Follett's monardella	--/--/1B.2	USFS_S-Sensitive	Lower montane coniferous forest. Open rocky serpentine slopes. 755-1680m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 3.44, 4.34, 5.21, 16.69, and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Monardella stebbinsii	Stebbins' monardella	--/--/1B.2	USFS_S-Sensitive	Broadleafed upland forest, chaparral, lower montane coniferous forest. On steep, loose slopes of generally reddish serpentine talus and boulders. 760-1860 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 16.69 and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Oreostemma elatum	tall alpine-aster	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Bogs and fens, meadows and seeps, upper montane coniferous forest. Mesic sites. 1155-2045 m.	A	Although project limits at PMs 3.44, 4.34, 5.21, 16.69, and 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Orobanche ludoviciana var. arenosa	Suksdorf's broom-rape	--/--/2B.3	USFS_WL-Watch List	Great Basin scrub. 1345-2075 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Packera eurycephala	Lewis Rose's ragwort	--/--/1B.2	BLM_S-Sensitive	Cismontane woodland, lower montane coniferous forest, chaparral. Steep	HP	Based on habitat requirement and the presence of potential suitable habitat near the

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var. lewisrosei			USFS_S- Sensitive	slopes and in canyons in serpentine soil, often along or near roads. 285-1890 m.		ESL at PMs 16.69 and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Peltigera gowardii	western waterfan lichen	--/--/4.2	USFS_S- Sensitive	Riparian forest. On rocks in cold water creeks with little or no sediment or disturbance. Often associated with rich bryophyte flora. 1065-2375 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Penstemon janishiae	Janish's beardtongue	--/--/2B.2	BLM_S- Sensitive	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Volcanic soils; gravelly sites. 1335-2225 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Penstemon personatus	closed- throated beardtongue	--/--/1B.2	BLM_S- Sensitive USFS_S- Sensitive	Lower montane coniferous forest, upper montane coniferous forest, chaparral. Usually on north-facing slopes in metavolcanic soils. 1340-2125 m.	A	Although project limits at PMs 3.44, 4.34, 5.21, and 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Penstemon sudans	Susanville beardtongue	--/--/1B.2	BLM_S- Sensitive USFS_S- Sensitive	Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodland. Volcanic rocky sites; sometimes on roadsides. 1280-2430 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 3.44, 4.34, 5.21, and 29.76, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.

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Perideridia bacigalupii	Bacigalupi's yampah	--/--/4.2	USFS_WL- Watch List	Chaparral, lower montane coniferous forest. Steep rocky banks or slopes on serpentine. 450-1035 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Phaeocollybia olivacea	olive phaeocollybia	--/--/--	USFS_S- Sensitive	Scattered or in arcs in mixed forests containing Fagaceae or Pinaceae in coastal lowlands.	A	Although project limits fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Pinus ponderosa var. washoensis	Washoe pine	--/--/-	USFS_WL- Watch List	Upper mixed-conifer to lower subalpine. (1400)2000-3000 m (generally hybridizes with Pinus ponderosa at 1700-2000 m; growing near but not hybridizing with Pinus jeffreyi at 1800-2100 m).	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Poa sierrae	Sierra blue grass	--/--/1B.3	USFS_S- Sensitive	Lower montane coniferous forest. Shady, moist, rocky slopes. Often in canyons. 365-1915 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 8.68, and 10.00, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Polystichum lonchitis	northern holly fern	--/--/3	USFS_WL- Watch List	Subalpine coniferous forest, upper montane coniferous forest. Moist shady crevices in granite or carbonate cliffs. 1800-2600 m.	A	Although project limits at PM 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Potamogeton praelongus	white-stemmed pondweed	--/--/2B.3	USFS_WL-Watch List	Marshes and swamps. Deep water, lakes. 1800-3000 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Pyrrocoma lucida	sticky pyrrocoma	--/--/1B.2	BLM_S-Sensitive USFS_S-Sensitive	Lower montane coniferous forest, meadows and seeps, Great Basin scrub. Alkaline flats, clay soils. 760-2090 m.	A	Although project limits at PM 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Rhamnus alnifolia	alder buckthorn	--/--/2B.2	USFS_WL-Watch List	Meadows and seeps, lower montane coniferous forest, upper montane coniferous forest, riparian scrub. Mesic sites. 1460-2135 m.	A	Although project limits at PMs 3.44, 4.34, 5.21, and 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Rhynchospora alba	white beaked-rush	--/--/2B.2	USFS_WL-Watch List	Bogs and fens, meadows and seeps, marshes and swamps. Freshwater marshes and sphagnum bogs. 60-1875 m.	A	Although project limits at PM 29.76 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Rhynchospora capitellata	brownish beaked-rush	--/--/2B.2	USFS_WL-Watch List	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. Mesic sites. 45-1710 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.

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Schoenoplectus subterminalis	water bulrush	--/--/2B.3	USFS_WL-Watch List	Marshes and swamps, bogs and fens. Montane lake margins, in shallow water. 880-2425 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Scopelophila ligulata	Moss	--/--/	USFS_WL-Watch List	Soil and rock, cliffs and road cuts. 300-1900 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Scutellaria galericulata	marsh skullcap	--/--/2B.2	USFS_WL-Watch List	Marshes and swamps, lower montane coniferous forest, meadows and seeps. Swamps and wet places. 0-1950 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Sedum albomarginatum	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. 455-1850 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 16.69 and 20.58, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.
Sidalcea gigantea	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.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 8.68, and 10.00, it is anticipated that the species may be present at the project sites. However, the species was not observed during field surveys, and no known observations have been reported near the ESL.

Appendix C • Regional Species Evaluation Table - Plants

Silene occidentalis ssp. occidentalis	western campion	--/--/4.3		Lower montane coniferous forest, upper montane coniferous forest, chaparral. Open, dry sites. 1230-2090 m.	A	Although project limits at PMs 0.06, 3.44, 4.34, 5.21, and 16.69 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Solidago gigantea	smooth goldenrod	--/--/	USFS_WL-Watch List	Moist streambanks, lakesides. 1000-2000 m.	A	Although project limits fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Stachys pilosa	hairy marsh hedge-nettle	--/--/2B.3	USFS_WL-Watch List	Great Basin scrub, meadows and seeps. Mesic sites. 785-2045 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Stellaria longifolia	long-leaved starwort	--/--/2B.2	USFS_WL-Watch List	Bogs and fens, meadows and seeps, riparian woodland, upper montane coniferous forest. Moist areas. 975-1790 m.	A	Although project limits at PMs 3.44, 4.34, and 5.21 fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Stellaria obtusa	obtuse starwort	--/--/4.3		Upper montane coniferous forest, lower montane coniferous forest, riparian woodland. Streams or seeps in conifer forest. 150-2135 m.	HP	Based on habitat requirement and the presence of potential suitable habitat near the ESL at PMs 0.06, 3.44, 4.34, 5.21, 8.68, 10.00, and 16.69, it is anticipated that the species may be present at the project sites. However, the species was not observed during

Appendix C • Regional Species Evaluation Table - Plants

						field surveys, and no known observations have been reported near the ESL.
Streptanthus longisiliquus	long-fruit jewelflower	--/--/4.3		Lower montane coniferous forest, cismontane woodland. Openings. 715-1500 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.
Trichodon cylindricus	cylindrical trichodon moss	--/--/2B.2	USFS_WL-Watch List	Broad-leafed upland forest, upper montane coniferous forest. Moss growing in openings on sandy or clay soils on roadsides, stream banks, trails or in fields. 50-1500 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Trifolium lemmonii	Lemmon's clover	--/--/4.2	SB_USDA-US Dept of Agriculture USFS_WL-Watch List	Great Basin scrub, lower montane coniferous forest. Slopes and valleys in sandy loam to clayey soils. 1500-1830 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Utricularia intermedia	flat-leaved bladderwort	--/--/2B.2		Bogs and fens, meadows and seeps, marshes and swamps, vernal pools. Mesic meadows, lake margins, marshes, fens. 670-2655 m.	A	Although project limits fall within the species' known range, suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Veronica cusickii	Cusick's speedwell	--/--/4.3	SB_RSABG-Rancho Santa Ana Botanic Garden	Alpine boulder and rock field, subalpine coniferous forest, upper montane coniferous forest, meadows and seeps. Gravelly soil. 2135-3000 m.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. No documented occurrences are in Plumas County. Therefore, the species will not be impacted by the proposed project.

			USFS_WL-Watch List			
Viola tomentosa	felt-leaved or woolly violet	--/--/4.2	USFS_WL-Watch List	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest. In open, conifer forest in dry, gravelly soils. 1035-2015 m.	A	Although the species have been known to occur in Plumas County, project limits are outside the species' known range and suitable habitat is not present. No known observations have been reported near the ESL; thus, the species is not anticipated to be found within the area of disturbances.
Status Explanation				Habitat Evaluation		
California Native Plant Society (CNPS)		Federal		A (Absent) = the ESL is outside of the species known range and/or potential suitable habitat is not present in the ESL and no further work is needed.		
-- = No status		-- = No status		HP (Habitat Present) = potential suitable habitat is or may be present in the ESL. The species may be present.		
1B = Rare, threatened, or endangered in California and elsewhere				P (Present) = the species known to occur (documented in CNDDDB or elsewhere) and/or was observed during field surveys within the ESL.		
2B= Rare, threatened, or endangered in California, but more common elsewhere		State		CH (Critical Habitat) = the ESL is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present.		
3 = Plants about which more information is needed - a review list		-- = No status				
4 = Limited distribution - A Watch List						
0.1 = Seriously endangered in California						
0.2 = Fairly endangered in California						
0.3 = Not very endangered in California						

Appendix D Regional Species Table – Wildlife

Regional Evaluation Table - Wildlife						
Scientific Name	Common Name	Status Federal/State	Other Status	Habitat	Habitat Present/Absent	Impact and Rationale
Accipiter gentilis	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, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is in Butterfly Valley. The occurrence is more than 2 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.
Antigone canadensis tabida	greater sandhill crane	--/T	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 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is in American Valley. The occurrence is more than 7 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.
Antrozous pallidus	pallid bat	--/--	BLM_S-Sensitive CDFW_SSC- Species of Special Concern IUCN_LC-Least Concern USFS_S- Sensitive WBWG_H-High Priority	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is about 0.80 mile southwest of Grizzly Summit, just north of Bucks Lake Rd. The occurrence is more than 5 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.

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Aplodontia rufa californica	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.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is about 2 miles northeast of Red Hill within Rich Gulch, north of East Branch North Fork Feather River. The occurrence is more than 1 mile away from all project sites. Therefore, the species will not be impacted by the proposed project.
Bombus occidentali s	western bumble bee	--/--	USFS_S-Sensitive XERCES_IM- Imperiled	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The exact location is unknown, but the closest occurrence is mapped in the vicinity of Caribou, adjacent to the North Fork Feather River. The occurrence is more than 3 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.
Corynorhin us townsendii	Townsend's big-eared bat	--/--	BLM_S-Sensitive CDFW_SSC- Species of Special Concern IUCN_LC-Least Concern USFS_S- Sensitive WBGW_H-High Priority	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The exact location is unknown, but the closest occurrence is mapped in the vicinity of Shenandoah Mine. The mine is about 1.1 miles south of SR 70 at Rich Bar Rd. and 2.7 miles northwest of Mount Pleasant. The occurrence is 2 or miles away from all project sites. Therefore, the species will not be impacted by the proposed project.

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Empidonax traillii	willow flycatcher	--/E	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.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is at Indian Creek at Arlington Bridge, 1 mile southwest of Crescent Mills. The occurrence is more than 7 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.
Emys marmorata	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 and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. However, no documented occurrences are in Plumas County. The species was not observed during field surveys. Therefore, the species will not be affected or impacted by the proposed project.
Erethizon dorsatum	North American porcupine	--/--	IUCN_LC-Least Concern	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges. Wide variety of coniferous and mixed woodland habitat.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The most recent occurrence was documented in 1928. The exact location is unknown, but it is mapped in the vicinity of Red Hill, about 3.5 miles northwest of Virgilia and northeast of Belden. The occurrence is about 0.50 mile away from project site at PM 20.58. Therefore, the species will not be impacted by the proposed project.

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Gulo gulo	California wolverine	PT/T	CDFW_FP-Fully Protected IUCN_NT-Near Threatened USFS_S-Sensitive	Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats. Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is at Schneider Creek in Meadow Valley, northeast of Bucks Lake. The occurrence is more than 7 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.
Haliaeetus leucocephalus	bald eagle	D/E	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, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The closest documented occurrence is on Grizzly Creek at the south side of Grizzly Forebay. The occurrence is more than 3 miles away from all project sites. Therefore, the species will not be impacted by the proposed project.
Hypomesus transpacificus	Delta smelt	T/E	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.	A	Project limits are outside the species' distribution range, and suitable habitat is not present. Therefore, the species will not be affected or impacted by the proposed project.

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Lasionycter is noctivagans	silver-haired bat	--/--	IUCN_LC-Least Concern WBWG_M-Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The exact location is unknown, but the closest documented occurrence is mapped about 10 miles southeast of Stirling City. The occurrence is about 1 mile away from project site at PM 0.06. Therefore, the species will not be impacted by the proposed project.
Margaritifera falcata	western pearlshell	--/--	IUCN_NT-Near Threatened	Aquatic. Prefers lower velocity waters.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. The closest documented occurrence is in the North Fork Feather River at the North Fork Campground. The occurrence is about 1.89 miles from the project site at PM 16.69. No documented occurrences are near the project limits. The species was not observed during field surveys. Therefore, impacts to the species is not anticipated.

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Martes caurina	Pacific marten	--/--	IUCN_LC-Least Concern USFS_S-Sensitive	Mixed evergreen forests with more than 40% crown closure along North Coast and Sierra Nevada, Klamath and Cascade mountains. Needs variety of different-aged stands, particularly old-growth conifers and snags which provide cavities for dens/nests.	A	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. However, no documented occurrences are in Plumas County. The species was not observed during field surveys. Therefore, the species will not be affected or impacted by the proposed project.
Mylopharodon conocephalus	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 and slow water velocity. Not found where exotic centrarchids predominate.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. The closest documented occurrence is in the North Fork Feather river 0.80 mile southwest of the Rock Creek Powerhouse. The occurrence is more than 0.25 mile from the project site at PM 3.44. No documented occurrences are near the project limits. The species was not observed during field surveys.
Myotis thysanodes	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.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. The exact location is unknown, but the closest documented occurrence is mapped about 10 miles southeast of Stirling City. The occurrence is about 1 mile away from project site at PM 0.06. Therefore, the species will not be impacted by the proposed project.

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Pekania pennanti	fisher - West Coast DPS	--/T	BLM_S-Sensitive CDFW_SSC-Species of Special Concern USFS_S-Sensitive	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. All documented occurrences are more than 10 miles from all project sites. Therefore, the species will not be impacted by the proposed project.
Rana boylei	foothill yellow-legged frog	--/CT	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. The closest documented occurrences are in the North Fork Feather River from the arch rock to 1.4 miles downstream of arch rock and within 0.3 mile of lower Bear Ranch Creek. The occurrences are about 0.75 mile from the project site at PM 0.06. No documented occurrences are near the project limits. The species was not observed during field surveys.
Rana draytonii	California red-legged frog	T/--	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	Lowlands and 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.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. However, no documented occurrences are in Plumas County. The species was not observed during field surveys. Therefore, the species will not be affected or impacted by the proposed project.

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Rana sierrae	Sierra Nevada yellow-legged frog	E/T	CDFW_WL-Watch List IUCN_EN-Endangered USFS_S-Sensitive	Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs. to complete their aquatic development.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. The closest documented occurrences are west of Grizzly Forebay along Big Ravine and a tributary to the west. The occurrences are about 1.30 miles from the project sites at PM 3.44 and 4.34. No documented occurrences are near the project limits. The species was not observed during field surveys.
Rhyacophila spinata	spiny rhyacophila n caddisfly	--/--		Vegetation along second-order streams with rapidly flowing water.	HP	Based on habitat requirement and the presence of potential suitable habitat within the ESL, it is anticipated that the species may be present at project site. The closest documented occurrences are along Granite Creek north of Tobin on the Feather River. The occurrences are about 0.18 mile from the project site at PM 8.68. The ESL has no second-order streams. No documented occurrences are near the project limits. The species was not observed during field surveys. Therefore, the species will not be impacted by the proposed project.

Appendix D • Regional Species Evaluation Table - Wildlife

Strix nebulosa	great gray owl	--/E	CDF_S-Sensitive IUCN_LC-Least Concern USFS_S-Sensitive	Resident of mixed conifer or red fir forest habitat, in or on edge of meadows. Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. All documented occurrences are more than 25 miles from all project sites. Therefore, the species will not be impacted by the proposed project.
Strix occidentalis	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 and other deciduous hardwoods. Canopy closure >40%. Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water.	A	Although the project limits fall within the species' distribution range, suitable habitat is not present in the ESL. All documented detections are within mountain ridges or hills. Project sites are along SR 70. Therefore, the species will not be impacted by the proposed project.

Status Explanation		Habitat Evaluation
Federal	State	A (Absent) = the ESL is outside of the species known range and/or potential suitable habitat is not present in the ESL and no further work is needed.
-- = No status definition	-- = No status definition	HP (Habitat Present) = potential suitable habitat is or may be present in the ESL. The species may be present.
D = Delisted	CT = Candidate Threatened	P (Present) = the species known to occur (documented in CNDDB or elsewhere) and/or was observed during field surveys within the ESL.
E = Endangered	E = Endangered	CH (Critical Habitat) = the ESL is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present.
PT = Proposed Threatened	T = Threatened	
T = Threatened		

Appendix E Species List Queries



United States Department of the Interior

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



In Reply Refer To:
Consultation Code: 08ESMF00-2019-SLI-2299
Event Code: 08ESMF00-2020-E-02125
Project Name: Plumas 70 Permanent Restoration

January 02, 2020

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

To Whom It May Concern:

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

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:
http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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

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

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

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

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

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

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

3

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2019-SLI-2299

Event Code: 08ESMF00-2020-E-02125

Project Name: Plumas 70 Permanent Restoration

Project Type: TRANSPORTATION

Project Description: The purpose of this project is to construct a permanent repair of the damaged roadway embankment and protect the highway from a slip-out slope failure at various locations.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/40.014465604692845N121.22274663908797W>



Counties: Butte, CA | Plumas, CA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*

Threatened

There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: <https://ecos.fws.gov/ecp/species/2891>

Species survey guidelines:

<https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf>

Sierra Nevada Yellow-legged Frog *Rana sierrae*

Endangered

There is final critical habitat for this species. Your location is outside the critical habitat.

Species profile: <https://ecos.fws.gov/ecp/species/9529>

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: <https://ecos.fws.gov/ecp/species/321>

Critical habitats

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



Inventory of Rare and Endangered Plants

*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

Plant List

49 matches found. Click on scientific name for details

Search Criteria

Found in Quads 3912174, 3912183 4012112 and 4012111;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Rare Plant	Blooming Period	CA State Rank	Global Rank
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Anomobryum julaceum	slender silver moss	Bryaceae	moss		4.2	S2	G5?
Arctostaphylos mewukka ssp. truei	True's manzanita	Ericaceae	perennial evergreen shrub	Feb-Jul	4.2	S3	G4?T3
Aspidotis carlottahalliae	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	4.2	S3	G3
Astragalus webberi	Webber's milk-vetch	Fabaceae	perennial herb	May-Jul	1B.2	S1	G1
Betula glandulosa	dwarf resin birch	Betulaceae	perennial deciduous shrub	May-Jul	2B.2	S2	G5
Boechera constancei	Constance's rockcress	Brassicaceae	perennial herb	May-Jul	1B.1	S2	G2
Brodiaea sierrae	Sierra foothills brodiaea	Themidaceae	perennial bulbiferous herb	May-Aug	4.3	S3	G3
Calycadenia oppositifolia	Butte County calycadenia	Asteraceae	annual herb	Apr-Jul	4.2	S3	G3

<u>Cardamine pachystigma</u> dissected-leaved <u>var. dissectifolia</u> toothwort	Brassicaceae	perennial rhizomatous herb	Feb-May	1B.2	S2	G3G5T2Q
<u>Carex buxbaumii</u> Buxbaum's sedge	Cyperaceae	perennial rhizomatous herb	Mar-Aug	4.2	S3	G5
<u>Carex geyeri</u> Geyer's sedge	Cyperaceae	perennial rhizomatous herb	May-Aug	4.2	S4	G5
<u>Carex petasata</u> Liddon's sedge	Cyperaceae	perennial herb	May-Jul	2B.3	S3	G5
<u>Carex scabriuscula</u> Siskiyou sedge	Cyperaceae	perennial rhizomatous herb	May-Jul	4.3	S4	G4G5
<u>Carex sheldonii</u> Sheldon's sedge	Cyperaceae	perennial rhizomatous herb	May-Aug	2B.2	S2	G4
<u>Clarkia gracilis ssp. albicaulis</u> white-stemmed clarkia	Onagraceae	annual herb	May-Jul	1B.2	S3	G5T3
<u>Clarkia mildrediae ssp. lutescens</u> golden-anthered clarkia	Onagraceae	annual herb	Jun-Aug	4.2S3	G3T3	
<u>Clarkia mildrediae ssp. mildrediae</u> Mildred's clarkia	Onagraceae	annual herb	May-Aug	1BS2 .3 S3	G3T2T 3	
<u>Clarkia mosquinii</u> Mosquin's clarkia	Onagraceae	annual herb	May-Jul(Sep)	1B .1	S2 G2	
<u>Claytonia palustris</u> marsh claytonia	Montiaceae	perennial herb	May-Oct	4.3S4	G4	
<u>Cypripedium californicum</u> California lady'sslipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	4.2S4	G4	
<u>Cypripedium fasciculatum</u> clustered lady'sslipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2S4	G4	
<u>Darlingtonia californica</u> California pitcherplant	Sarraceniaceae	perennial rhizomatous herb (carnivorous)	Apr-Aug	4.2S4	G4	
<u>Eleocharis torticulmis</u> California twisted spikerush	Cyperaceae	perennial rhizomatous herb	Jun-Jul	1B .3	S1 G1	
<u>Eremogone cliftonii</u> Clifton's eremogone	Caryophyllaceae	perennial herb	Apr-Sep	1BS2 .3 S3	G2G3	
<u>Erigeron lassenianus var. deficiens</u> Plumas rayless daisy	Asteraceae	perennial herb	Jun-Sep	1BS2 .3 S3	G3G4T 2T3	
<u>Erigeron petrophilus var.</u> northern Sierra daisy	Asteraceae	perennial rhizomatous herb	Jun-Oct	4.3S4	G4T4	

<u>sierrensi</u>					
<u>s</u>					
<u>Eriogonu</u>					
<u>m</u>					
<u>umbellatu</u>	Ahart's buckwheat	Polygonaceae	perennial herb	Jun-Sep	1B _{.2} S3 G5T3
<u>m</u>					
<u>var.</u>					
<u>ahartii</u>					
<u>Erythranth</u>	fern-leaved				
<u>e</u>	monkeyflower	Phrymaceae	annual herb	Apr-Jun	1B _{.2} S2 G2
<u>filicifolia</u>					
<u>Erythran</u>					
<u>the</u>	shield-bracted				
<u>glaucesc</u>	monkeyflower	Phrymaceae	annual herb	Feb-Aug(Sep)	4.3 _{.1} S3 _{.4} G3G4
<u>ens</u>					
<u>Erythranth</u>	Serpentine Canyon				
<u>e percaulis</u>	monkeyflower	Phrymaceae	annual herb	(Mar)May(Jun)	1B _{.1} S1 G1
<u>Frangula</u>					
<u>purshiana</u>					
<u>ssp.</u>	Caribou coffeeberry	Rhamnaceae	perennial deciduous shrub	May-Jul	1B _{.2} S2 S3 G4T2T
<u>ultramafic</u>					
<u>a</u>					
<u>Fritillaria</u>	Butte County				
<u>eastwoodi</u>	fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	3.2S3 G3Q
<u>ae</u>					
<u>Lewisia</u>					
<u>cantelovii</u>	Cantelow's lewisia	Montiaceae	perennial herb	May-Oct	1B _{.2} S3 G3
<u>Lupinus</u>					
<u>dalesiae</u>	Quincy lupine	Fabaceae	perennial herb	May-Aug	4.2S3 G3
<u>Monardell</u>					
<u>a follettii</u>	Follett's monardella	Lamiaceae	perennial shrub	Jun-Sep	1B _{.2} S2 G2
<u>Monardell</u>					
<u>a</u>	Stebbins' monardella	Lamiaceae	perennial rhizomatous herb	Jul-Sep	1B _{.2} S2 G2
<u>stebbinsii</u>					
<u>Oreostem</u>					
<u>ma elatum</u>	tall alpine-aster	Asteraceae	perennial herb	Jun-Aug(Sep)	1B _{.2} S2 G2
<u>Packera</u>					
<u>euryceph</u>					
<u>ala var.</u>	Lewis Rose's				
<u>lewisrose</u>	ragwort	Asteraceae	perennial herb	Mar-Jul(Aug-Sep)	1B.2 S2 G4T2
<u>i</u>					
<u>Penstemo</u>					
<u>n</u>	closed-throated beardtongue	Plantaginaceae	perennial herb	Jun-Sep(Oct)	1B.2 S2 G2
<u>personatus</u>					
<u>Poa</u>					
<u>sierrae</u>	Sierra blue grass	Poaceae	perennial rhizomatous herb	Apr-Jul	1B.3S3 G3
<u>Rhamnus</u>					
<u>alnifolia</u>	alder buckthorn	Rhamnaceae	perennial deciduous shrub	May-Jul	2B.2S3 G5
<u>Rhynchos</u>					
<u>pora</u>	brownish beaked-rush	Cyperaceae	perennial herb	Jul-Aug	2B.2S1 G5
<u>capitellata</u>					

<u>Sedum</u>	Feather River					
<u>albomarginatum</u>	stonecrop	Crassulaceae	perennial herb	May-Jun	1B.2	S2 G2
<u>Sidalcea</u>			perennial rhizomatous			
<u>gigantea</u>	giant checkerbloom			(Jan-Jun)Jul-Oct	4.3S3	G3
			Malvaceae herb			
<u>Silene</u>						
<u>occidentalis ssp. occidentalis</u>	Western campion	Caryophyllaceae	perennial herb	Jun-Aug	4.3S3	G4T3
			perennial rhizomatous			
	obtusifolia					
<u>Stellaria</u>						
<u>obtusifolia</u>			Caryophyllaceae herb	May-Sep(Oct)	4.3S4	G5
<u>Streptanthus</u>						
<u>longisiliquus</u>	long-fruit jewelflower	Brassicaceae	perennial herb	Apr-Sep	4.3S3	G3
			perennial stoloniferous			
<u>Utricularia</u>	flat-leaved					
<u>intermedia</u>	bladderwort	Lentibulariaceae	herb (carnivorous)	(Jun)Jul-Aug	2B.2	S3 G5
			(aquatic)			

Suggested Citation

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Contributors

[The Calflora Database](#)[The California Lichen Society](#)[California Natural Diversity Database](#)[The Jepson Flora Project](#)[The Consortium of California Herbaria](#)

Questions and

Comments

Emails

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



Query Criteria: Imported file selection

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Cantelow's lewisia <i>Lewisia cantelovii</i>	PDPOR04020	None	None	G3	S3	1B.2
Caribou coffeeberry <i>Frangula purshiana ssp. ultramafica</i>	PDRHA0H061	None	None	G4T2T3	S2S3	1B.2
Clifton's eremogone <i>Eremogone cliftonii</i>	PDCAR17010	None	None	G2G3	S2S3	1B.3
Constance's rockcress <i>Boechera constancei</i>	PDBRA06090	None	None	G2	S2	1B.1
Darlingtonia Seep <i>Darlingtonia Seep</i>	CTT51120CA	None	None	G4	S3.2	
Feather River stonecrop <i>Sedum albomarginatum</i>	PDCRA0A030	None	None	G2	S2	1B.2
fern-leaved monkeyflower <i>Erythranthe filicifolia</i>	PDPHR01150	None	None	G2	S2	1B.2
flat-leaved bladderwort <i>Utricularia intermedia</i>	PDLNT020A0	None	None	G5	S3	2B.2
Follett's monardella <i>Monardella follettii</i>	PDLAM180W0	None	None	G2	S2	1B.2
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
hardhead <i>Mylopharodon conocephalus</i>	AFCJB25010	None	None	G3	S3	SSC
Lewis Rose's ragwort <i>Packera eurycephala var. lewisrosei</i>	PDAST8H182	None	None	G4T2	S2	1B.2
Mildred's clarkia <i>Clarkia mildrediae ssp. mildrediae</i>	PDONA050Q2	None	None	G3T2T3	S2S3	1B.3

North American porcupine <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
Plumas rayless daisy <i>Erigeron lassenianus</i> var. <i>deficiens</i>	PDAST3M262	None	None	G3G4T2T3	S2S3	1B.3
Quincy lupine <i>Lupinus dalesiae</i>	PDFAB2B1A0	None	None	G3	S3	4.2
Serpentine Canyon monkeyflower <i>Erythranthe percaulis</i>	PDPHR01140	None	None	G1	S1	1B.1
Sierra blue grass <i>Poa sierrae</i>	PMPOA4Z310	None	None	G3	S3	1B.3
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	AMAF01013	None	None	G5T3T4	S2S3	SSC
silver-haired bat <i>Lasionycteris noctivagans</i>	AMACC02010	None	None	G5	S3S4	

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Thursday, January 02, 2020 Information Expires 6/1/2020



Selected Elements by Common Name

California Department of Fish & Wildlife

California Natural Diversity Database



Rare Plant

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	SSC or FP
spiny rhyacophilan caddisfly <i>Rhyacophila spinata</i>	IITRI19080	None	None	G1G2	S1S2	
Stebbins' monardella <i>Monardella stebbinsii</i>	PDLAM180L0	None	None	G2	S2	1B.2
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC
Webber's milk-vetch <i>Astragalus webberi</i>	PDFAB0F9J0	None	None	G1	S1	1B.2
western bumble bee <i>Bombus occidentalis</i>	IIHYM24250	None	Candidate Endangered	G2G3	S1	
western pearlshell <i>Margaritifera falcata</i>	IMBIV27020	None	None	G4G5	S1S2	

Rank/CDFW Record Count: 26

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Thursday, January 02, 2020 **Information Expires 6/1/2020**

Appendix F Past, Present, and Future Projects

Records:45			
Ea	Efis	Co-Rte-PM	Nick
02-0H380	0215000005	PLU-070-1/1.3	Elephant Butte Tunnel Lighting
02-0H450	0215000017	PLU-070-11.5/11.9	Opapee Curve Improvement
02-0H510	0215000023	PLU-070-0/0	Beckwourth Maint Station Building Addition
02-0H550	0215000050	PLU-070-0.4/29.7	Plumas 70 Drainage
02-0H800	0215000068	PLU-070-31.82/31.82	Soda Creek Fish Passage
02-0J110	0219000062	PLU-070-33.1/42.1	Keddie Overlay
02-0J230	0219000075	PLU-070-0.58/30.68	Plumas 70 Culverts
02-0J340	0219000090	PLU-070-27/27.0001	Twain Sinkhole
02-1C750	0200000080	PLU-070-14.9/14.9	Yellow Creek Bridge
02-1H010	0215000096	PLU-070-46.2/53.5	Spring Garden Overlay
02-1H530	0217000095	PLU-070-0/11	Butte Rogers Flat DO
02-1H540	0216000020	PLU-070-0/0	Four Plumas Bridges
02-1H580	0216000024	PLU-070-58.4/78.4	Cromberg Rehab
02-1H58U	0219000092	PLU-070-58.4/78.4	Cromeather
02-1H750	0217000086	PLU-070-0/0	Culvert Shed Slide
02-1H760	0217000087	PLU-070-11/26	The Gauntlet

02-1H860	0216000009	PLU-070-61/62.4	Fence Repair
02-26336	0200000154	PLU-070-78.4/86	WEST BECKWOURTH REHAB
02-2C090	0200000161	PLU-070-50.6/51.7	Spring Garden Bridge Rehabilitation
02-2E000	0200000187	PLU-070-17.2/17.4	Caribou Curve Improvement
02-2H270	0216000071	PLU-070-18.1/18.1001	Plumas 70 EFA
02-2H440	0216000076	PLU-070-11.27/11.27	Rock Creek Rock Slide
02-37310	0200000278	PLU-070-35.1/35.5	Replace Spanish Crk Bridge
02-37311	0200020271	PLU-070-35.1/35.5	Spanish Crk Br Reveg
02-37781	0200000286	PLU-070-79.1/0	LT Davis SRRA
02-3C300	0200000317	PLU-070-0/35.2	MBGR-BUTTE CO. LINE TO RT. 89
02-3E920	0200020231	PLU-070-71.5/78.4	Portola & Crescent Mills Overlay
02-3E940	0200020217	PLU-070-0/33	Feather River Slurry Seal
02-3H100	0217000056	PLU-070-0/0	Tobin Indian Chips DO
02-3H340	0217000098	PLU-070-33.38/33.38	Greenville Wye/Indian Creek Retaining Wall
02-3H500	0217000132	PLU-070-45.2/45.2001	Quincy MS Heater and Duct
02-3H670	0218000008	PLU-070-34.6/34.6001	Historic Rock Wall Failure
02-3H740	0218000025	PLU-070-65.8/66.2	Feather River Inn Intersection
02-3H750	0218000028	PLU-070-27.4/27.4001	Crib Wall
02-4E810	0212000039	PLU-070-9.2/0	Chain Control Areas Worker Safety
02-4E920	0212000066	PLU-070-81.3/0	Beckwourth Maint State Roof
02-4E980	0212000115	PLU-070-37.5/46.2	Quincy Microsurfacing
02-4F100	0212000110	PLU-070-23.7/23.9	Plu 70 Perm Restoration
02-4F110	0212000124	PLU-070-16/16	Crescent Mills Sinkhole Repair
02-4F840	0213000042	PLU-070-12.8/16.54	Chip Fire Restoration
02-4G390	0214000008	PLU-070-32.7/33.5	Indian Creek Rail
02-4H010	0218000068	PLU-070-78.3/90.3	Beckwourth CAPM
02-4H440	0218000119	PLU-070-0/29.9	Plumas 70 Permanent Restoration
02-4H610	0218000158	PLU-070-31.4/31.6	Plu 70 Sinkhole
02-4H900	0219000022	PLU-070-80.4/80.8	Plumas 70 Light Poles
02-4H960	0219000031	PLU-070-23.7/23.7001	Rush Creek Fish Passage

[Close](#)

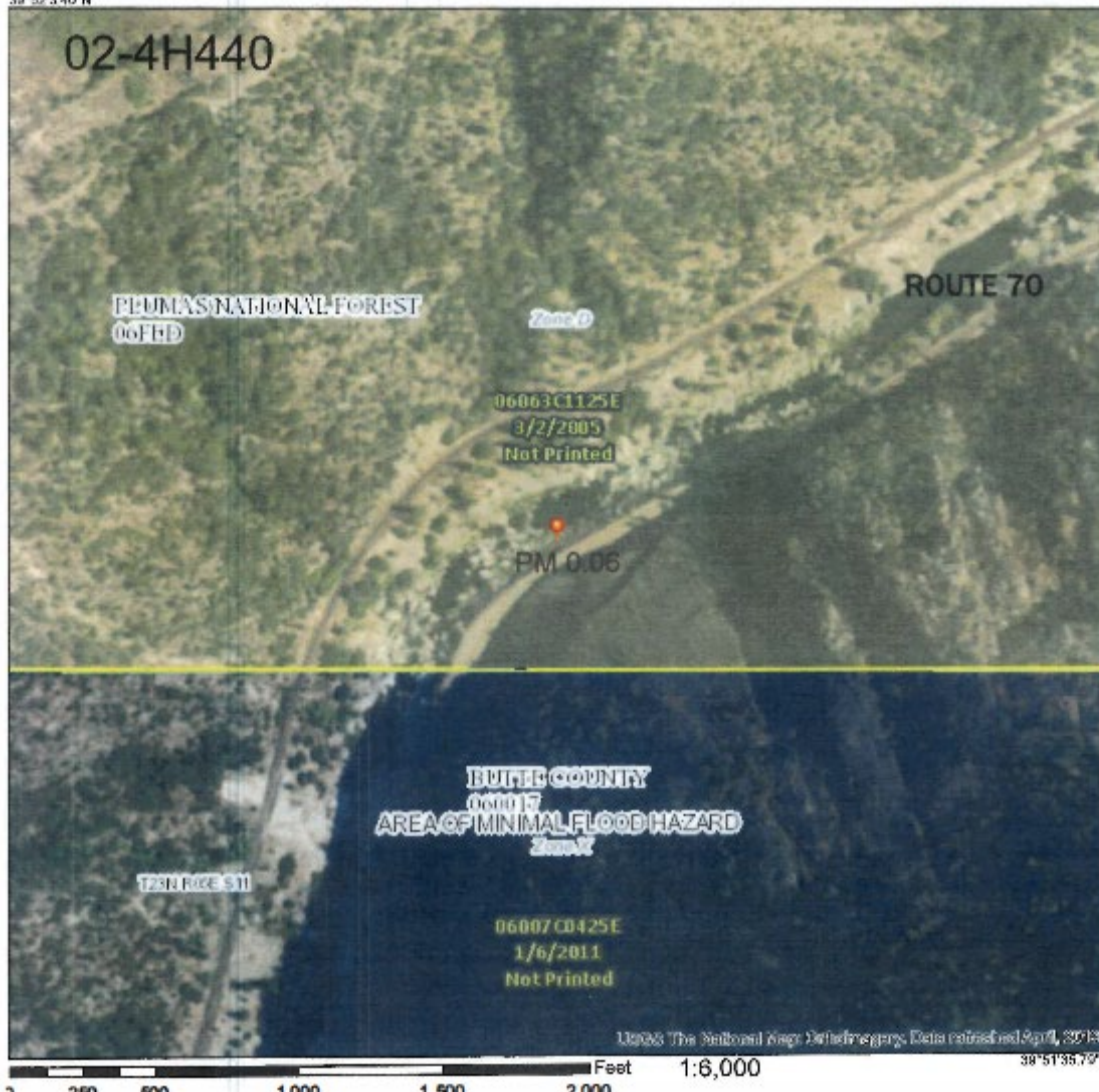


Appendix G Federal Emergency Management Agency Flood Insurance Rate Maps

National Flood Hazard Layer FIRMette



39°52'3.40"N



Legend

SEE FIRM REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

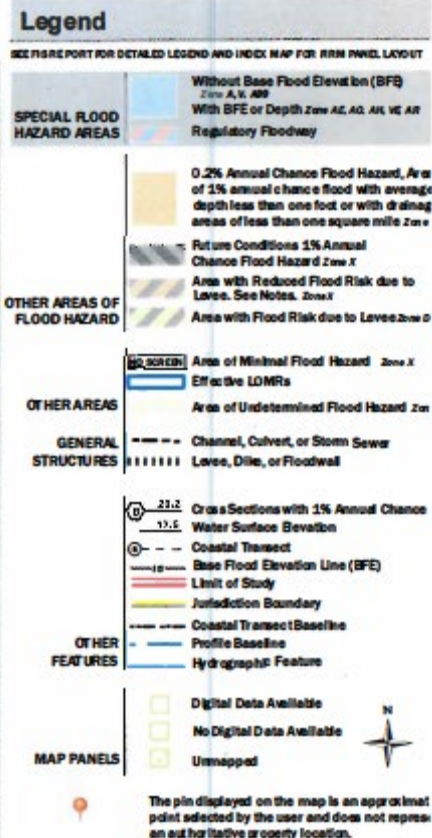
SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, X, AE, AG
	With BFE or Depth Zone AE, AG, AH, U, V, W
	Regulatory Roadway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone J
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee, See Notes, Zone X
	Area with Flood Risk due to Levee Zone B
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone X
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Tract
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Tract Baseline
MAP PANELS	Profile Baseline
	Hydrographic Feature
	Digital Data Available
	No Digital Data Available
	Unmapped
	The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/11/2019 at 12:48:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodified areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

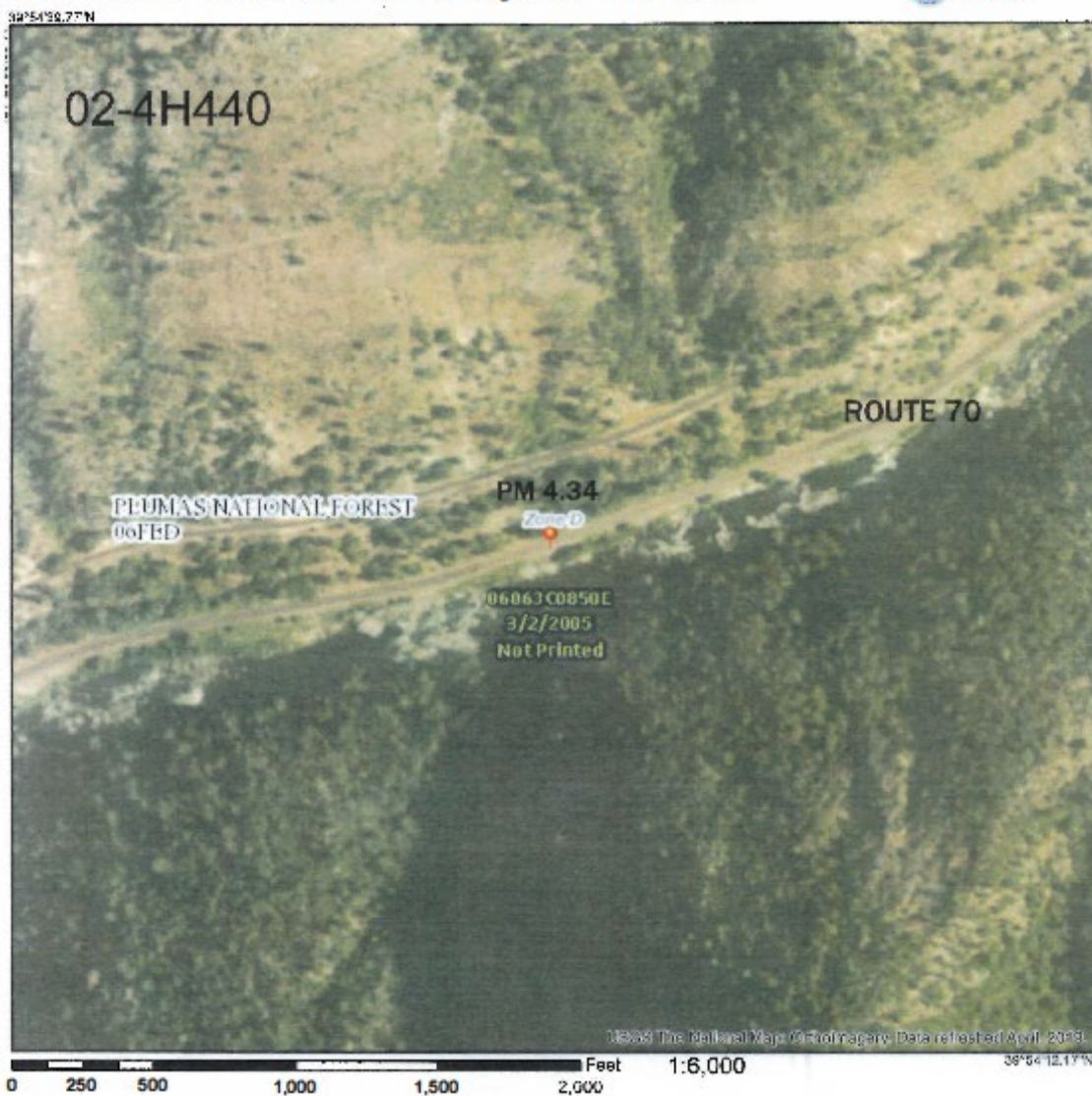


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

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National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	<p>Without Base Flood Elevation (BFE) Zone A, V, AE With BFE or Depth Zone AC, AO, AH, VE, AR Regulatory Floodway</p>
OTHER AREAS OF FLOOD HAZARD	<p>0.2% Annual Chance Flood Hazard, Area of 1% Annual chance flood with average depth less than one foot or with draining area of less than one square mile Zone Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levees. See Notes. Zone X Area with Flood Risk due to Levees Zone D</p>
OTHER AREAS	<p>No Screen Area of Minimal Flood Hazard Zone X Effective LOMRs Area of Undetermined Flood Hazard Zone</p>
GENERAL STRUCTURES	<p>Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall</p>
OTHER FEATURES	<p>Cross Sections with 1% Annual Chance Water Surface Elevation Coastal Transsect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transsect Baseline Profile Baseline Hydrographic Feature</p>
MAP PANELS	<p>Digital Data Available No Digital Data Available Unmapped</p>

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/13, 2023 at 1:28:34 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, a scale bar, map creation date, community identifier, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodeled areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



39° 04' 42.00" N



Legend

SEE FIRM REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, X, and Z
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Roadway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with draining areas of less than one square mile
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levees. See Notes. Zone X
	Area with Flood Risk due to Levees Zone D
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transact
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transact Baseline
	Profile Baseline
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped



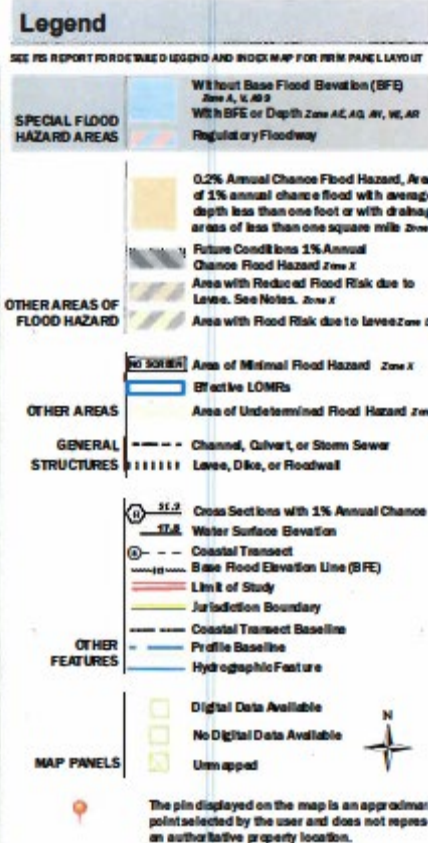
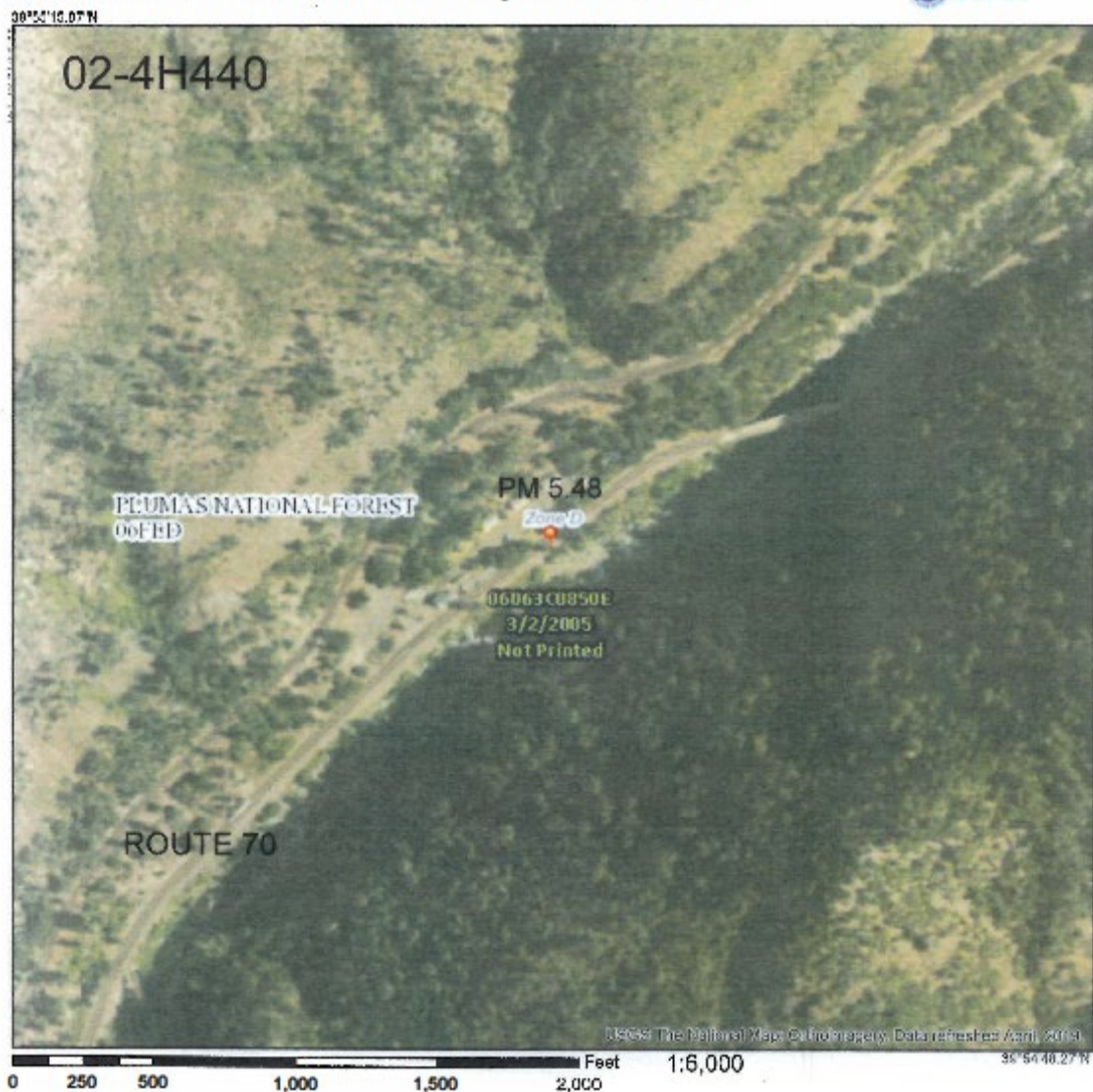
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/11/2019 at 1:23:58 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/11/2023 at 1:30:18 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifier, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



Legend

SEE THIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR RRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A V, AR
	With BFE or Depth Zone AE, A9, AH, VE, AR
	Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with draining area of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone X
OTHER AREAS	Area of Minimal Flood Hazard Zone X
	Effective LOMRs
GENERAL STRUCTURES	Area of Undetermined Flood Hazard Zone X
	Channel, Culvert, or Storm Sewer
OTHER FEATURES	Levee, Dike, or Roadwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS	Coastal Transect
	Base Flood Elevation Line (BFE)
OTHER FEATURES	Limit of Study
	Jurisdiction Boundary
OTHER FEATURES	Coastal Transect Baseline
	Profile Baseline
OTHER FEATURES	Hydrographic Feature
	Digital Data Available
MAP PANELS	No Digital Data Available
	Unmapped

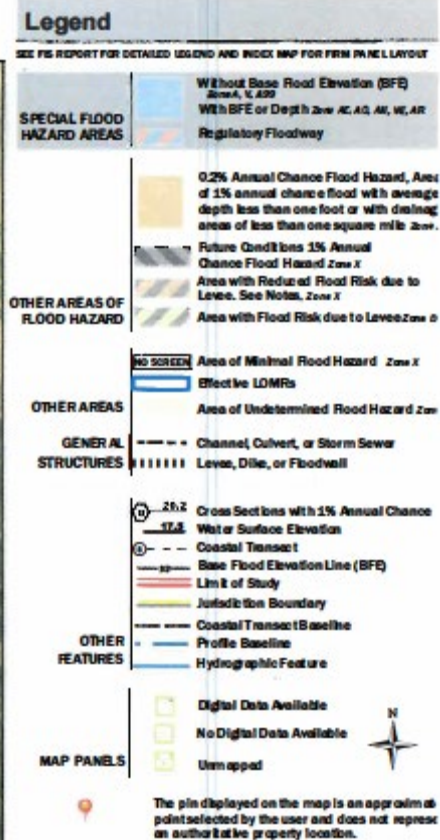
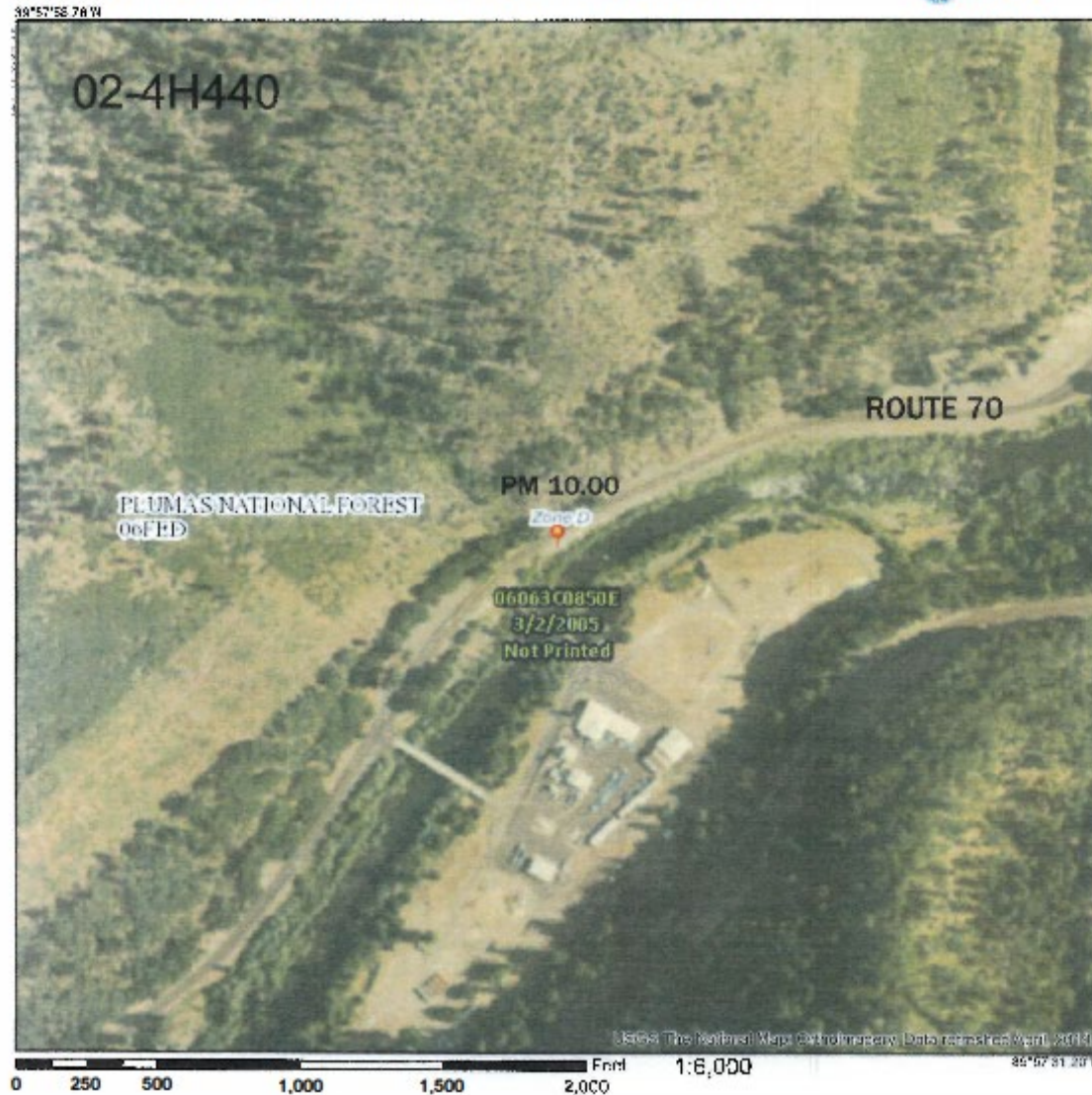
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/11/2019 at 1:39:55 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifier, RRM panel number, and RRM effective date. Map images for unmapped and unmoderated areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

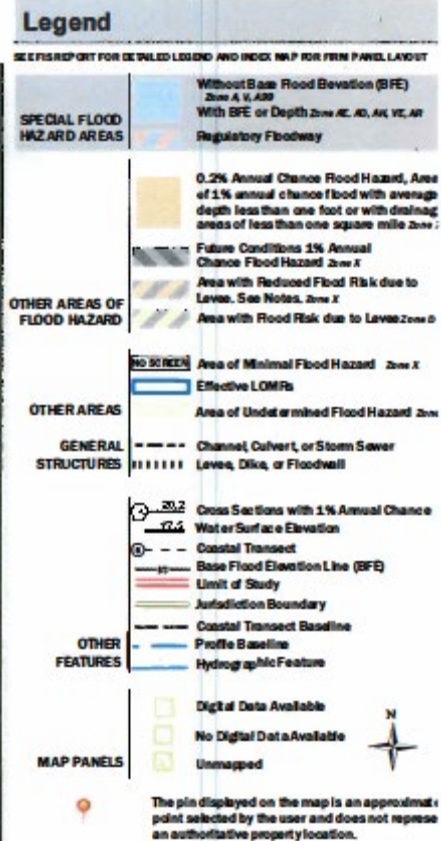
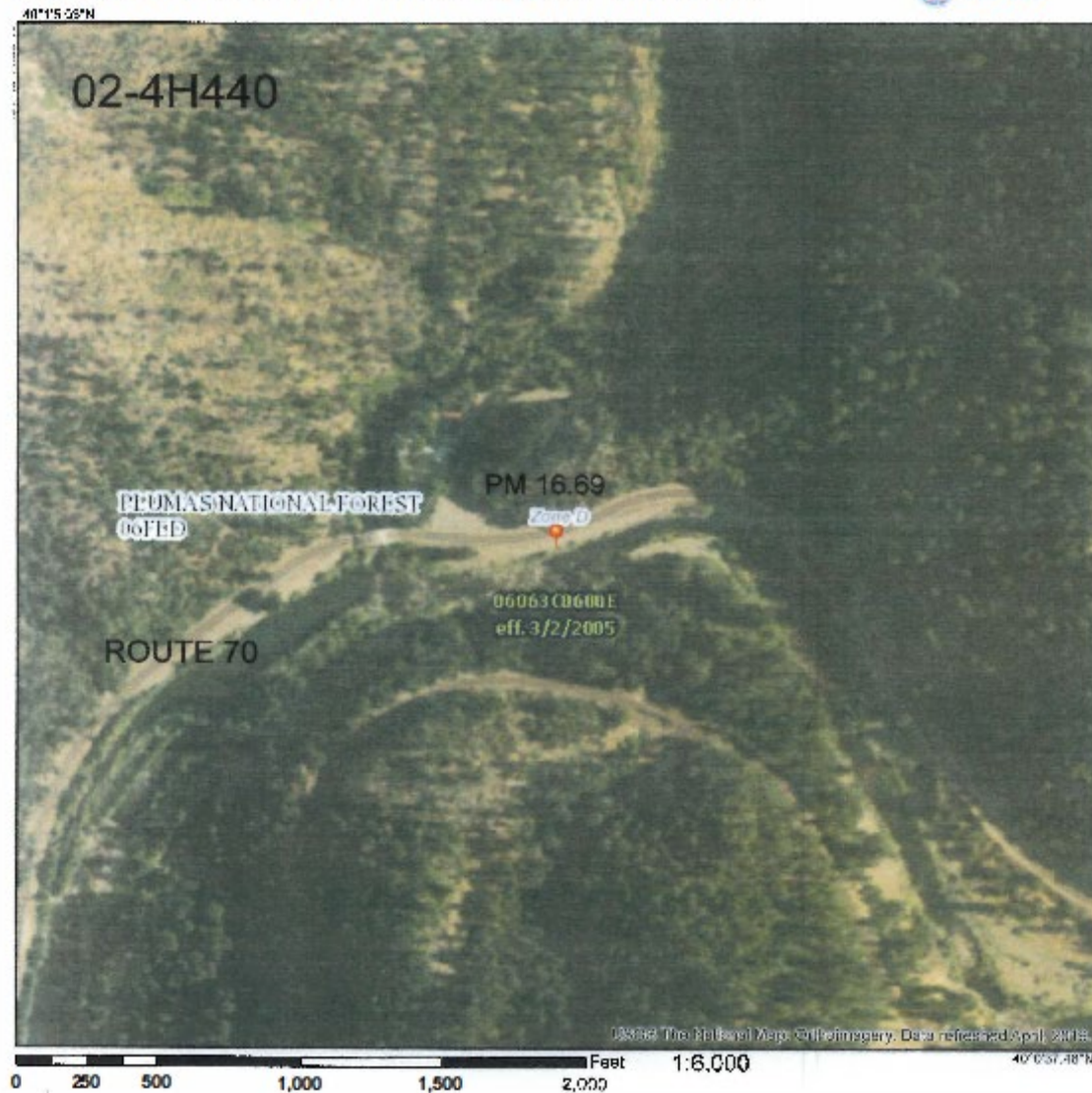


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 03/11/2019 at 1:54:06 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

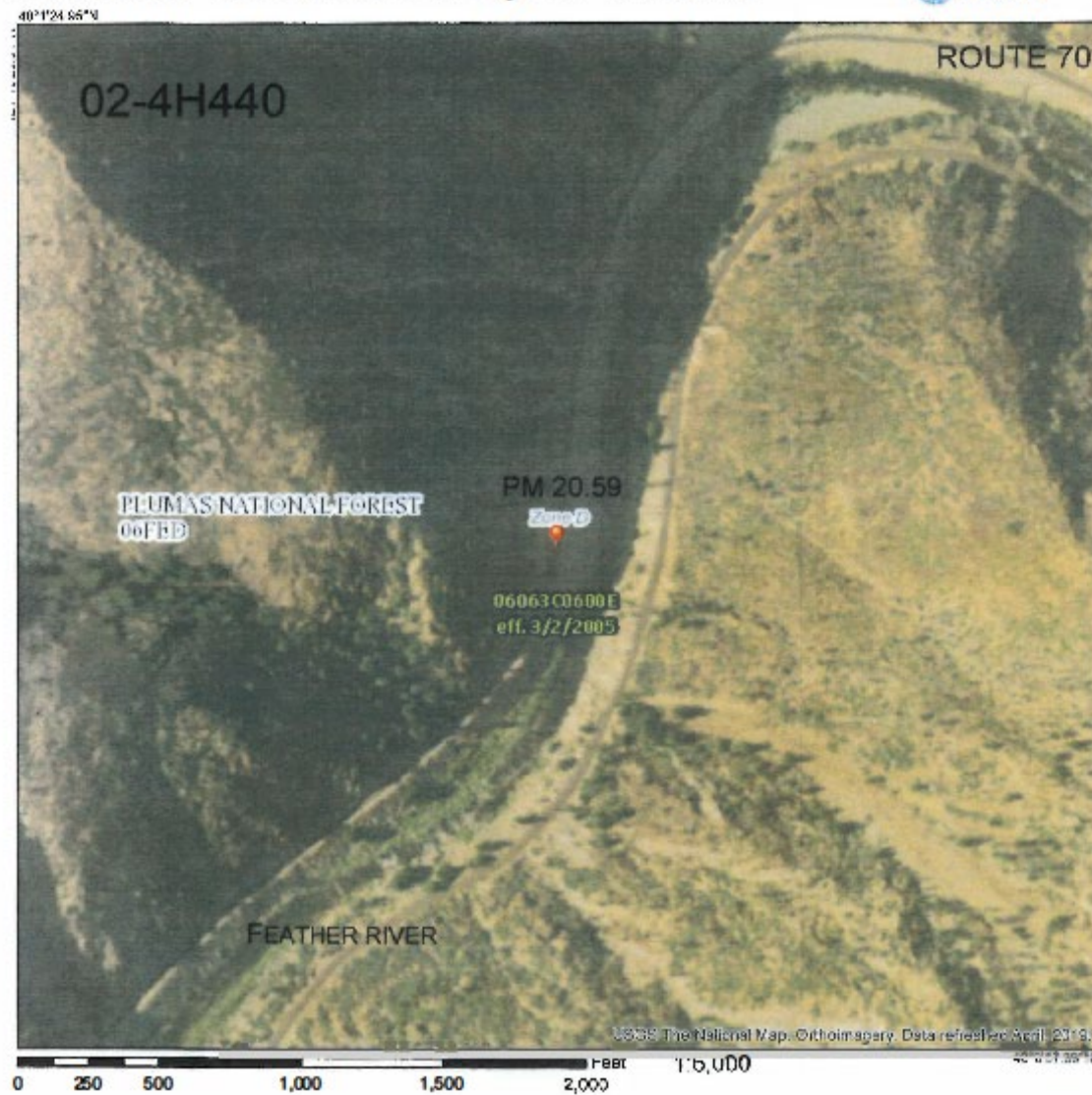


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web service as provided by FEMA. This map was exported on 10/15/2019 at 2:09:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and undetermined areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



Legend

SEE FIRMS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A 1, A99
	With BFE on Depth Zone A1, A9, A19, V1, V19
	Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone 1
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levees. See Notes, Zone X
	Area with Flood Risk due to Levees Zone D
OTHER AREAS	Area of Minimal Flood Hazard Zone X
	Effective LOM Ra
GENERAL STRUCTURES	Area of Undetermined Flood Hazard Zone 1
	Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Tract
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

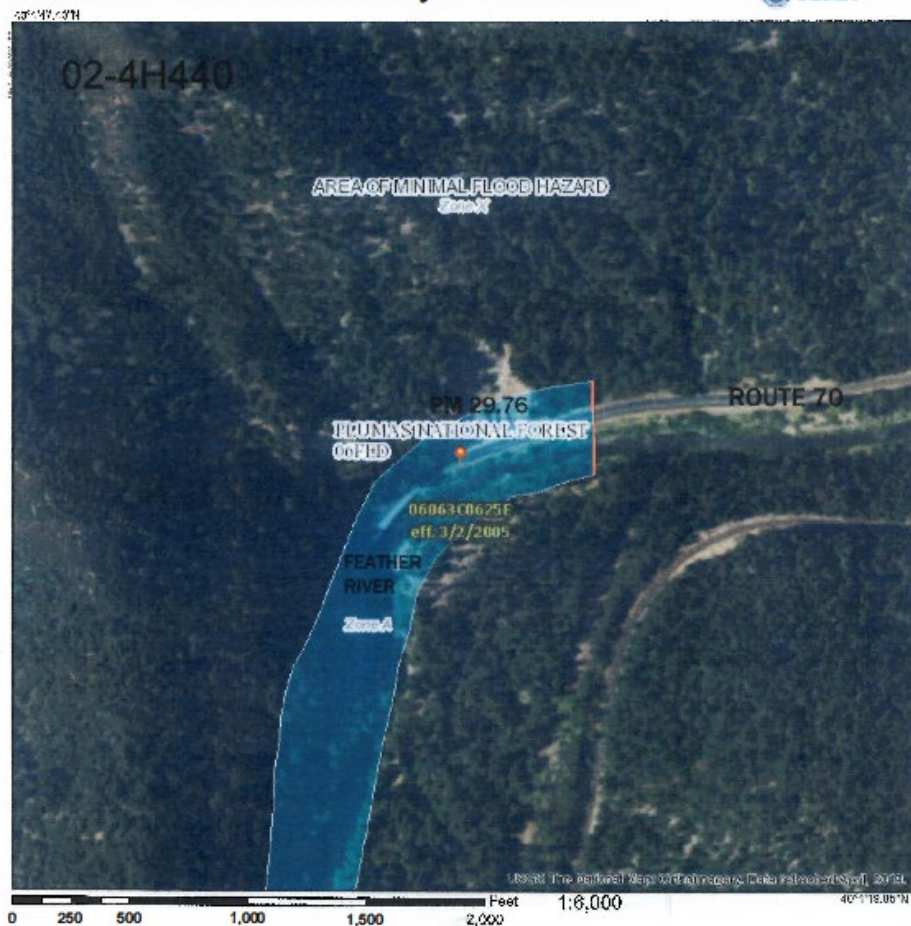
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web service provided by FEMA. This map was exported on 10/23/2019 at 2:24:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel numbers, and FIRM effective date. Map images for unmapped and unmapped areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/13/2019 at 2:28:07 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifier, FIRM panel number, and FIRM effective date. Map images for unmapped and unmapped areas cannot be used for regulatory purposes.



Appendix H List of Technical Studies

Air Quality Report

Noise Study Report

Water Quality Report

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

☐ Historic Resource Evaluation Report

☐ Historic Architectural Survey Report

☐ Archaeological Survey Report

Hazardous Waste Reports

☐ Initial Site Assessment

☐ Preliminary Site Investigation (Geophysical Survey)

Scenic Resource Evaluation/Visual Assessment

Initial Paleontology Study

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

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



Appendix I Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determinations

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) requires consideration of:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance, in public or private ownership regardless of whether they are open to the public, who’s primary value warrants preservation in place (See 23 U.S.C. § 138(a) and 49 U.S.C. § 303(a))

When private institutions, organizations, or individuals own parks, recreational areas or wildlife and waterfowl refuges, Section 4(f) does not apply, even if such areas are open to the public. In contrast, Section 4(f) applies to all historic sites that are listed, or eligible for inclusion in the National Register of Historic Places (NRHP) at the local, state, or national level of significance regardless of whether or not the historic site is publicly owned or open to the public.

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project does not permanently use the property and does not hinder the preservation of the property.

The project area is located within the Plumas National Forest and dispersed recreation occurs along the North Fork Feather River (fishing, panning for gold, swimming, rafting/boating). There are no developed parks or recreation sites (campgrounds and trailheads) or developed boating/rafting access locations within the project Limits. The proposed project would not affect recreational use of the North Fork Feather River. Similarly, there are no publicly owned wildlife and waterfowl refuges located within or adjacent to the project area.

Two historic sites located within the project's Section 106 Area of Potential Effects were evaluated relative to the requirements of Section 4(f); Caltrans determined that these resources do not trigger the provisions of Section 4(f).

4(f) Properties

PLU-454

The eligible prehistoric resource CA-PLU-454, exists within the project's Area of Potential Effect. However, by implementing standard avoidance and minimization measures, the proposed project would result in a Finding of No Adverse Effect. The resource will be protected in its entirety.

This property is a Section 4(f) property. However, this project will not result in a "use" of this property as defined by Section 4(f).

"Use" is defined by 23 CFR 774.17 as:

1. When land from a Section 4(f) resource is permanently incorporated into a transportation facility or project (actual use);
2. When there is a temporary occupancy of Section 4(f) resource that does not meet the five criteria of temporary use; and
3. When there is constructive use of the Section 4(f) resource.

This resource will not be permanently incorporated into the transportation facility or project, nor would the project result in a temporary occupancy. In addition, the project would not result in proximity impacts that would result in substantial impairment to the property's activities, features, or attributes that qualify the property for protection under Section 4(f). Therefore, the project would not result in a constructive use.

Feather River Highway Historic District

Within a National Register listed historic district Section 4(f) applies to those properties that are considered contributing to the eligibility of the historic district, as well as any individually eligible property within the district. The proposed project would not use land from a historic and/or contributing property lying within the Feather River Highway Historic District and would not use any land within the district that is considered contributing to its historical significance. As such, there is no direct use of the historic district for purposes of Section 4(f). With respect to constructive use, Section 106 consultation resulted in a determination of No Adverse Effect, therefore there is no Section 4(f) constructive use of the district as a whole.