Cromberg Rehabilitation & Feather River Inn Intersection

Plumas County, CA
02–PLU–70-PM 58.2/R78.4 & 02-PLU-70-PM 65.8/R66.2
EA 02-1H580 & 02-3H740
EFIS 0216000024 & 0218000025

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
State of California, Department of Transportation

Caltrans

June 2021

General Information about This Document

What's in this document:
The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of the proposed Cromberg Improvement Project and Feather River Inn Intersection project in Plumas County on Highway 70. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this Initial Study.
- You are invited to review the environmental document and technical studies. A printed copy of the document can be found during business hours (Monday–Friday, 8:00 a.m. to 4:30 p.m.) at the Caltrans District Office located at 1657 Riverside Drive in Redding or at the following locations:

    - Plumas County Library at 445 Jackson Street, Quincy, CA
    - Plumas County Post Office at 222 Lawrence Street, Quincy, CA
    - Plumas County Library at 34 Third Avenue, Portola CA
    - https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs

    We welcome your comments. If you have any information or concerns regarding the project, please send your written comments to Caltrans by the deadline. Submit comments via regular mail to:

    California Department of Transportation
    Attn: Andre' Benoist
    Department of Transportation, North Region Redding
    1031 Butte Street, MS-30, Redding, CA 96001

- You may also submit comments via email to: andre.benoist@dot.ca.gov.
- Be sure to send comments by the deadline: August 2, 2021

What happens next:
After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project; (2) do additional environmental studies; or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Andre' Benoist, North Region Office of Environmental Management, 1031 Butte Street, Redding, CA 96001; (530) 218-8940 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

SCH No. *Pending*
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Cromberg Rehabilitation & Feather River Inn Intersection

Initial Study with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

STATE OF CALIFORNIA
Department of Transportation

Approved By: Wesley Stroud Date: 6/10/21

Wesley Stroud, Office Chief
North Region Office of Environmental Management
California Department of Transportation
(530) 356-3004

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PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate and widen a 20-mile section of Highway 70 between the communities of Cromberg and Portola in Plumas County, California. The proposed scope of work includes reconstructing the roadway and adding 4- to 8- foot paved shoulders where there is currently little or no paved shoulder. Additional improvements include: minor curve realignments, raising the highway in Deleker to reduce the occurrence of highway flooding, replacing the bridge rail at Humbug Creek Bridge, road widening without lane additions at the Feather River Inn Road intersection, repaving the park and ride at the intersection of Highway 89 and 70, and bringing drainage systems, guardrail, and signage up to current standards throughout the project limits. Improvements in the City of Portola include updating curb ramps to Americans with Disabilities Act (ADA) standards, constructing new sidewalk in locations that do not currently have sidewalk, repaving, and potentially re-striping to reduce the number of through lanes from 2 in each direction, to 1 in each direction in order to provide bike lanes and on-street parking throughout the city. A final decision on re-striping would be made following public input on the proposal.

Determination

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

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

The proposed project would have no impact on: land use and planning, mineral resources, population and housing, tribal and cultural resources, and recreational resources.

The proposed project would have less than significant impacts on: aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, utilities and service systems, wildfire, and mandatory findings of significance.

Individual impacts would not have a cumulatively significant impact on the environment.

Approved By: _____ Date: _____

Wesley Stroud, Office Chief (Redding)
North Region Environmental
California Department of Transportation
(530) 356-3004

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List of Abbreviated Terms

AB	Assembly Bill
ARB	(California) Air Resources Board
BAU	Business-as-usual
BMPs	Best management practices
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane
CNDDB	California National Diversity Database
CO_2	Carbon dioxide
CO	Carbon monoxide
CO-CAT	Coastal and Ocean Working Group of the California Climate Action Team
CTP	California Transportation Plan
CVRWQCB	Central Valley Regional Water Quality Control Board
DOT	Department of Transportation
EO	Executive Order
EPACT92	Energy Policy Act of 1992
ESA	Environmentally sensitive area
FCAA	Federal Clean Air Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse gas
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	Difluoroethane
HFC-23	Fluoroform
H_2S	Hydrogen sulfide
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
$MMTCO_2e$	Metric tons of carbon dioxide
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NO_x	Nitrogen oxides
N_2O	Nitrous oxide
OPR	Office of Planning Research
OSTP	Office of Science and Technology Policy
O_3	Ozone
Pb	Lead
PPM	Parts per million
PM	Post mile or particulate matter (air quality)
ROG	Reactive organic gas
RTP	Regional Transportation Plan

SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SLR	Sea-level rise
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SR	State Route
TCAPCD	Tehama County Air Pollution Control District
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental protection Agency
VOCs	Volatile organic compounds
VMT	Vehicle miles traveled

Chapter 1. Proposed Project

Project Title
Cromberg Rehabilitation & Feather River Inn Intersection

Lead Agency Name and Address
California Department of Transportation, District 2
Office of Environmental Management, MS-30
1657 Riverside Drive
Redding, CA 96001

Contact Person and Phone Number
Carolyn Sullivan
Caltrans Environmental Branch Chief, R2
Phone: (530) 218-8940
Email: Carolyn.Sullivan@dot.ca.gov

Project Location
The proposed Cromberg Rehabilitation Project is located on Highway 70 in Plumas County from post mile marker (PM) 58.2 to R78.4. The Feather River Inn improvement project is located within the Cromberg Rehabilitation Project limits between PM 65.8 and R66.2. A project location map showing the limits of work for both projects and associated post miles is provided in Figure 1.

Existing Facility
State Route 70 through the project limits is a rural, two-lane conventional highway on a curvilinear alignment through mountainous terrain. The highway passes through the communities of Cromberg, Blairsden, and Delleker, and through the City of Portola. The route is characterized by steep cut and fill slopes within heavily forested land use. Speed limits vary within the project limits but are usually 55 miles per hour (mph) with a 35-mph zone through Portola and a 65-mph zone east of Portola at the end of the project. Existing lane widths are between 10- and 12-feet, and shoulder widths range from 0- to 4- feet with some limited areas up to eight feet. During the winter months, significant snowfall and freezing temperatures require a concerted snow removal maintenance effort on the highway.

The section of highway within the City of Portola is a “main street” setting with four traveled lanes, a center two-way left-turn lane, and at least eight feet of shoulder width that accommodates on-street parking. There is one signalized intersection and the roadway has existing curb, gutter, and sidewalks for almost the entire length of the city.

There is one bridge structure (Humbug Creek Bridge) in the 20-mile section of highway which is located at Humbug Creek near Delleker (PM 73.99). The bridge is 66-feet long and has an open (Type 9) rail. There are also approximately 210 culverts, ranging in size from 18-inch corrugated steel pipes to 10-foot by 6-foot concrete boxes.

A pavement survey in 2018 showed 80 percent of this 20.2-mile segment was in fair or poor condition. It is expected that by the year of construction 99.5 percent will be fair or poor. The existing asphalt concrete (AC) thickness was determined through coring, and the pavement ranges from 5- to 12- inches thick but is generally between seven and nine inches.

Purpose and Need

Purpose

The purpose of the Cromberg Rehabilitation Project is to reduce distressed lane miles, improve ride quality, prevent further extensive maintenance efforts, extend the pavement life of this segment of highway for a minimum of 20 years, and improve safety for all modes of transportation.

The purpose of the Feather River Inn Intersection Project is to widen SR 70 at Mohawk Road in anticipation of a possible future County project that would move the Feather River Inn Road connection to approximately 500 feet to the west forming one four-leg intersection at Mohawk Road, thus improving safety and operations.

Need

The existing pavement through the project limits has exceeded its service life. Currently, less than 10 percent of the pavement is in good condition, and by 2024, 100 percent of the pavement will be in fair condition. The roadway exhibits poor ride quality, and preventative maintenance measures are no longer cost-effective. Many of the existing culverts are undersized or have met their service life and need to be replaced. Guardrail and roadside signs do not meet current design guidance. There are also several existing nonstandard roadway features, noncompliant ADA curb ramps, missing and damaged sidewalk, and the facility experiences a higher than average collision rate for total, fatal plus injury, and fatal collision types.

The existing road connections at Mohawk Road and the Feather River Inn Road (County Route 129) are T-intersections located on opposite sides of SR 70 less than 500 feet apart on a 55-mph alignment. The Feather River Inn Road connection to SR 70 is within a highway curve which is undesirable for safety and operations and could be improved with a future County project that would move the road connection to the Mohawk Road Intersection.

Project Description (Build Alternative)

This alternative proposes to rehabilitate approximately 20 miles of the existing roadway and include the following improvements:

- Provide consistent 12-foot-wide driving lanes throughout the project limits.
- Reconstruct the structural section of highway to include a 4-foot paved shoulder from the beginning of the project at PM 58.2, to the SR 89 junction at PM R66.6, and provide an 8-foot paved shoulder from the SR 89 junction at PM R66.6 to the end of the project at PM 78.40.
- Adjust vertical curves to improve sight distance throughout the project limits.

- Improve drainage systems and raise the highway approximately 2 feet near the Sleepy Pines Motel (PM 75.0) to reduce the occurrence of highway flooding.

- Widen the roadway near the intersection of Feather River Inn Road and Highway 70 **(Feather River Inn Intersection Project)**.
- Replace bridge rails on Humbug Creek Bridge (Br. No. 09-0022 at PM 73.99) to current standards.
- Re-pave the State-owned Park & Ride at PM R66.63.
- Re-pave the Caltrans sand house at PM 70.67.
- Provide a standard width Clear Recovery Zone (CRZ) throughout the project limits where feasible.
- Repair, replace or extend drainage systems (culverts) as needed.
- Replace guardrail to meet current standards.
- Replace signs and striping to meet current standards.
- Reconstruct existing road and driveway connections
- Reconstruct curbs ramps and construct sidewalk where needed in the City of Portola.
- Repave and potentially re-stripe in the City of Portola to reduce the number of through lanes from 2 in each direction, to 1 in each direction in order to provide bike lanes and on-street parking throughout the city. A final decision on re-striping will be made following public input on the proposal.

Figure 1. Proposed project Limits. Highway 70, from Cromberg to Portola, Plumas County, CA

Construction Access
Temporary construction access off the highway would be needed to work on some culvert locations. Construction access is also needed to cut back hill sides and widen fill areas to improve the roadway. Temporary construction access would be taken from Highway 70 from the closed lane that is under reconstruction.

In-Water Work
Repairing, replacing, and extending drainage systems (culverts) would require in-channel work at some locations. The work window for in-channel construction is typically May 15 to October 15.

Disposal/Borrow Sites
No borrow sites are needed to complete the project. Approximately 275,000 cubic yards of earthwork would take place to rebuild the highway. All earthwork would be balanced within the project limits, meaning all the soil taken from the hillside above the highway would be used to build the fill areas below the roadway.

Staging/Stockpiling
Staging/stockpiling of materials and equipment would occur in the closed lane of the highway and in existing dirt pullouts. No additional staging and stockpiling areas would be created.

Right-of-Way
Most of the proposed work would be conducted within Caltrans' existing right-of-way. Minor amounts of additional new right-of-way would be acquired from public and private landowners. Temporary Construction Easements would be needed from public and private landowners as well to re-construct driveways and road connections. Caltrans is coordinating with the Plumas National Forest for improvements on federally managed lands.

Utilities
Existing water, sewer, telephone, and electric lines would need to be relocated prior to construction. Caltrans is coordinating with utility companies to relocate utilities where needed.

Drainage
Culverts within the project limits would be repaired, replaced, or extended as needed. Caltrans is evaluating approximately 186 drainage systems that occur within the project limits that may need to be modified.

Stormwater/ Erosion
Stormwater treatment Best Management Practices (BMPs) would be used within the project limits when feasible. It is anticipated BMPs would include existing and proposed bio-strips, bio-swales, detention basins, and infiltration basins. Areas disturbed by construction activities would be stabilized in accordance with erosion control plans prior to winter rain events.

Construction
The project could take up to 3 construction seasons to complete. Work may take place in multiple locations with one-way traffic control through the work area. Traffic delays are anticipated to last 20 to 30 minutes at a time.

Project Alternatives.

There are two proposed alternatives for this project, the one “build” alternative described above and the “no-build” alternative.

No-Build Alternative

The no-build alternative would not make any improvements to the existing facility within the project limits. Recurring extensive and costly maintenance efforts would be required to maintain an acceptable ride quality and the existing nonstandard geometric features would remain. This alternative does not meet the need and purpose of the project.

Permits and Approvals Needed

Work would require regulatory permits from the California Department of Fish and Wildlife, Army Corps of Engineers, and the Central Valley Regional Water Quality Control Board (CVRWQCB). In addition, a Notice of Intent would need to be filed with the State Water Resources Control Board to obtain coverage under the NPDES General Construction Permit (the permit regulates the discharge of storm water runoff from construction sites). Permits required for the project are summarized in Table 1.

Table 1. Permit and Approvals

Regulatory Agency	Permit Type
CDFW	Lake or Streambed Alteration Agreement (1600 permit)
CVRWQCB	Clean Water Act Section 401 Water Quality Certification
US Fish and Wildlife Service	Letter of Concurrence- Endangered Species Act Consultation
State Water Resources Control Board	A Notice of Intent would be filed to obtain coverage under the NPDES General Construction Permit. Because more than one acre of ground disturbance would occur, a Storm Water Pollution Prevention Plan (SWPPP) would need to be prepared in accordance with Caltrans standard specifications for water pollution control (California Department of Transportation 2018).
US Army Corps of Engineers	Nationwide Permit 14 (linear transportation projects)

Chapter 2. CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects would indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

See Section 3.1: Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

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

a) Land adjacent to Highway 70 within the project limits is a mix of residential property and forest land managed by the Plumas National Forest Service. There are no properties within the project limits that are being used for agriculture or grazing. All work would take place within the existing highway easement. The project would not 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. The project would not impact farmland.

b) Most of the project would take place within the existing highway easement. In spot locations, minor amounts of right-of-way is needed to construct the proposed improvements. The project does not have the potential to affect Williamson Act properties, therefore the project would not impact land in a Williamson Act Contract.

c) Approximately 40% of the project limits include land that is managed by the US Forest Service. However, most of the proposed highway improvements would take place within the existing highway easement. In spot locations, a minor amount of additional right-of-way would be needed from the US Forest Service or Private property owners. The project would not 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)). Therefore, there would be no impact to Forest Land.

d) The project would not result in the loss of forest land or convert forest land to non-forest use. Therefore, there would be no impact.

e) The 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. Therefore, there would be no impact.

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

III. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

See Section 3.2: Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

See Section 3.3: Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

See Section 3.4: Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. 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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

See section 3.5 Energy.

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

See Section 3.6: Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

See Section 3.7: Greenhouse Gas Emissions and Climate Change

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

See Section 3.8: Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. 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?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(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	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

See Section 3.9: Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING: Would the project:				
a) 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?	☐	☐	☐	☒

a) The project would take place in a rural, residential area in Plumas County from Cromberg to Portola. Land use adjacent to the project limits is primarily forest land or residential with some commercial and industrial uses occurring in Deleker and Portola. Since the highway is an existing facility and no additional lanes are being constructed, the project would not physically divide an established community. Therefore, there would be no impact.

b) The project would not affect existing and/or future land uses nor would the project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, and/or regulation adopted for avoiding or mitigating an environmental effect. Therefore, there would be no impact.

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XII. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a-b) No mineral resources occur within the project limits nor would any be affected by the proposed project. Therefore, there would be no impact.

The proposed project would have no impact on mineral resources.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. 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?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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?	☐	☐	☐	☒

See Section 3.10: Noise

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIV. 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) The project would not induce population growth, either directly or indirectly. The project would not add capacity or additional facilities such as an interchange or frontage road. Therefore, there would be no impact.

b) The project would take place within the existing highway right-of-way and would not displace any existing housing or people, necessitating the construction of replacement housing elsewhere. Therefore, there would be no impact.

The proposed project would have no impact on population and housing.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

See Section 3.11: Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. 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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a-b) The project would not increase the capacity of the highway and it would not increase traffic volumes. The project would not lead to additional development that would strain existing parks or other recreational facilities. The project does not include recreational facilities or require the construction and/or expansion of recreational facilities. Therefore, there would be no impact.

The proposed project would have no impact on recreation.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project 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)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

See Section 3.12: Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVIII. 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	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

a-b) Assembly Bill (AB) 52 (Chapter 532, California Statutes of 2014) establishes a formal consultation process for California tribes as part of the CEQA review process and equates significant impacts on "tribal cultural resources" with significant environmental impacts (Public Resources Code 21084.2). Caltrans contacted the following tribes to inform them of the project and request their participation: Greenville Rancheria of Maidu Indians, Maidu Summit Consortium, Washoe Tribe of Nevada and California, Estom Yumeka Maidu Tribe, Mooretown Rancheria of Maidu, Tsi Akim Maidu, Plumas County Museum. Currently, there are no tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 within the project area.

The proposed project would have no impact on tribal cultural resources.

XIX. 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?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

See Section 3.13: Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XX. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

See Section 3.14: Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XXI. 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?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Chapter 3. Discussion of Environmental Impacts

3.1 Aesthetics

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, 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 [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 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

The proposed project is in a rural, residential part of Plumas County. All of Highway 70 in Plumas County is designated as the Feather River Scenic Byway. The route is valued for its landscape diversity ranging from steep granite canyons, to forest land, to great basin prairie all in one route that is accessible all year. Great engineering feats such as the highway, railroad, hydro-power power dams are also part of the valuable viewshed of the area. From Deleker to Portola, the Middle Fork of the Feather River can be seen from the roadway, while driving. The Middle Fork of the Feather River is classified as a Wild and Scenic River.

Environmental Consequences

Proposed improvements, and construction activities would take place on and adjacent to the existing highway. Hillsides above the roadway would be cut back (cuts) in some locations, and fill areas (fills) would be widened in order to achieve the goal of providing 4- to 8-foot wide paved shoulders throughout the project limits. Both cuts and fills would be designed to be consistent with existing road cuts and fills along the highway corridor.

Tree removal is limited to the minimum area needed to construct the cuts and fills. Tree clearing in the areas that are on fairly flat terrain would be limited to the minimum needed to provide a Clear Recovery Zone (CRZ). The Clear Recovery Zone is an area typically 20 feet wide adjacent to the white line (fog line) of the road that is clear of large objects such as trees and boulders. This would allow an errant vehicle to safely recover if it left the road due to weather, high speed, driver distraction, or mechanical failure. In some locations creating a CRZ would increase views of surrounding open space and forest land. In other locations, creating a CRZ would increase sunlight on the roadway in the winter and decrease snow and ice accumulation.

At Humbug Creek Bridge, the new bridge rails would include aesthetic treatments in an effort to align with the high visual quality that Highway 70 in Plumas County provides. A final selection has not yet been determined but the new bridge rails would either have a decorative metal railing, or a treated concrete rail that compliments the surrounding area.

During construction, cut vegetation and disturbed soil would detract from the visual appeal of the highway, but this impact is temporary and would not last more than a year at any one location. After the highway is improved, final contour grading and erosion control materials would be applied, leaving the highway looking groomed and ready to receive new plant growth in the next growing season. Newly constructed slopes above and below the roadway would be compatible with the surrounding area.

CEQA Determination

The project would have a less than significant impact on aesthetics.

The proposed project would not have a substantial adverse effect on any scenic vistas, would not substantially damage scenic resources within a state scenic highway, and would not create a new source of substantial light or glare which would adversely affect day and/or nighttime views in the area. Temporary construction impacts would have a minor impact on the visual quality of the area until final grading is complete.

Avoidance, Minimization, and/or Mitigation Measures

- Trees would be planted where appropriate and where they would not interfere with highway facilities.
- Architectural treatments would be considered for bridge rails and retaining walls that are visible from the highway or the river.
- Treatments such as paint or stain would be considered for culvert downdrains, cable railings and rock fall fabric that is visible from the highway or the river.
- Large fill areas would be replanted with appropriate native species, or screened from view by landscaped berms.
- Large cuts and fills would be designed to blend into the existing terrain.

3.2 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 (NO_2), ozone (O_3), particulate matter (PM) —which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$), Lead (Pb), and sulfur dioxide (SO_2). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H_2S), 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 (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and in some areas (although not in California), sulfur dioxide (SO_2). California has nonattainment or maintenance areas for all these transportation-related "criteria pollutants" except SO_2 and 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 scope[1] 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.

Affected Environment

The project is in the south-eastern portion of Plumas County. The climate in this part of the county is characterized by hot summers and cold winters with frequent snowfall. Wind direction and strength varies seasonally in the project vicinity. In spring and summer, windy days are common.

The project limits are in the jurisdiction of the Northern Sierra Air Quality Management District (NSAQMD) and the California Air Resources Board (CARB). The NSAQMD is the primary agency responsible for preparing the Air Quality Management Plan (AQMP) in cooperation with local governments and the private sector. The AQMP provides the framework for meeting state and federal ambient air quality standards.

Transportation Conformity

This project is exempt from all air quality conformity analysis requirements per Table 2 of 40 Code of Federal Regulations (CFR) §93.126, subsection "Safety" ("Pavement resurfacing and/or rehabilitation, Widening narrow pavements, Shoulder improvements, Guardrails, median barriers, crash cushions"). Conformity requirements do not apply.

Environmental Consequences

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 PM2.5), and toxic air contaminants such as diesel exhaust particulate matter. Construction activities are expected to increase traffic

[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.

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.

Long-term operation of the project would not change traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions relative to the no build alternative; therefore, this project would not cause an increase in operational emissions.

CEQA Determination

The project would have a less than significant impact on air quality.

Once constructed, the project would not result in long-term air quality impacts. The project would not expose sensitive receptors to substantial pollutant concentrations, or result in other emissions (such as those leading to objectionable odors) that could adversely affect a substantial number of people. Short-term air quality impacts are related to construction activities and are limited to the immediate area surrounding the construction site.

Avoidance, Minimization, and/or Mitigation Measures

- 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 shall be applied to the site and equipment as often as necessary to control fugitive dust emissions.

- Construction equipment and vehicles would be properly tuned and maintained. All construction equipment would use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.

- A dust control plan would be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.

- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, would be used.

- All transported loads of soils and wet materials would be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) would 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 would be promptly and regularly removed to reduce PM emissions.

- Equipment and materials storage sites would be located as far away from residential uses as practicable. Construction areas would be kept clean and orderly.

- To the extent feasible, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

3.3 Biological Resources

Regulatory Setting

Natural Communities

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. Wetlands and other waters are also discussed below.

Wetlands and Other Waters

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 would 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 would 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 section for more details.

Plant Species
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 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.

Animal Species
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. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section below, including CDFW fully protected species and species of special concern, and USFWS or NOAA 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 Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Threatened and Endangered Species
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.

Invasive Species

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.

Affected Environment
Biological literature and record searches addressing the project area included review of numerous databases, lists, and maps, as well as visits to and/or contacts with relevant agencies (California Department of Transportation 2020c).

Biological field surveys were conducted on multiple occasions in 2018 & 2019 to evaluate the existing environment, gather information on the presence of special-status species, and determine project level impacts regarding biological resources.

A comprehensive Natural Environment Study report was completed September 2020. Results and findings based on the above literature searches, surveys, and analyses are presented below.

Habitats and Natural Communities of Concern
The majority of the project area consists of paved surfaces (e.g., roadway and shoulders). Riverine and riparian habitats are considered habitats of special concern and regulated under federal and state laws. A description of the onsite aquatic and riparian habitats is provided below, along with estimated impacts to the habitat, and identification of avoidance/minimization measures and compensatory mitigation that may be warranted.

Riverine Habitat
Perennial streams typically flow year-round during a year of normal rainfall. Water comes from smaller upstream waters, and groundwater while runoff from rainfall or other precipitation is supplemental. Intermittent streams flow for a length of time each year, typically during the wet season, but dry up over the summer months. In addition to rain water, groundwater provides water for stream flow. Ephemeral streams have flowing water during, and for a short time after, rainfall in a typical year. Rain water is the only source of water for stream flow in ephemeral streams. Ground water is not a source of water, and these streams are above the water table year-round in a typical year. The ESL contains numerous streams of all types.

Survey Results
Caltrans biologists performed aquatic resource delineations and identified ten perennial streams (54.65 acres), 11 intermittent streams and two additional intermittent segments (totaling 0.972 acres), and 32 ephemeral streams and 16 additional ephemeral segments (totaling 1.69 acres) within the project limits. While Long Valley, Bonta, and Consignee Creeks are mapped as perennial streams and Little Long Valley, Cogswell, Jackson, Cedar, Denton, Betterton, Willow, and Humbug Creeks are designated as intermittent on the USGS topographical maps, ground observations did not always support these designations. The remaining are unnamed streams that cross through the project ESL. In addition, the Middle Fork Feather River flows adjacent to the ESL in some locations.

Project Impacts
The project would permanently impact about 0.19 acres (8,276.4 square feet) of riverine habitat. Not all of the culvert improvements have been designed, especially those at ephemeral locations. Project work includes culvert replacement, extensions, and lining. Detailed descriptions of the proposed work on perennial and intermittent waterways are described in greater detail in the Natural Environment Study on file with Caltrans. No cumulative impacts are expected to result from this project.

Riparian Habitat
Griggs and River Partners (2009) defined riparian habitat as the land area that encompasses the river channel and its current or potential floodplain. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. These plant species are typically the dominant type and are adapted to the hydrological conditions adjacent to the stream systems.

Riparian habitat is found along some of the perennial streams. The dominant tree species found along the streams include willows *(Salix spp.)* and Ponderosa pine *(Pinus ponderosa)*. Understory vegetation includes, but are not limited to, Himalayan blackberry *(Rubus armeniacus),* wild rose *(Rosa spp.)*, and everlasting pea vine *(Lathyrus latifolius)*.

Survey Results
Riparian habitat occurs along the banks of Willow, Long Valley Creek, and Cogswell Creek. Species composition includes mountain alder *(Alnus alnobetula)*, black cottonwood *(Populus balsamifera)*, and willow species. In all, approximately 47 locations and about 2.44 acres of riparian habitat was observed in the ESL.

Project Impacts
About 0.15 acres of riparian habitat would be permanently impacted and 0.42 acres temporarily impacted. These impacts would occur to accommodate culvert extensions and replacement. Willows species, dogwood *(Cornus spp.)*, cottonwood, alder, and upland trees that function as riparian would be removed. Most impacts would be temporary and involve trimming of shrubs and trees for culvert access.

Wetlands and Other Waters
Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water less than 6.6 ft deep. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (wetland plants); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season.

Emergent Wetland – seasonally flooded
This habitat type in the form of wet meadows occur within the ESL, at the Feather River Inn and at 14 other locations within the ESL. At Chalet View Inn a small meadow is surrounded by landscaped lawn in front of the inn. It is a created wetland with a fountain for landscaping purposes. More representative seasonally flooded areas occur in front of the Feather River Inn and modified drainages for agricultural use. These have typical hydric vegetation such as Baltic sedge *(Juncus balticus)*, creeping spike-rush *(Eleocharis macrostachya)*, abrupt sedge *(Carex abrupta)*, and scouring rush *(Equisetum hyemale)* that changes to facultative invasive roadside grasses and herbs during the dry season.

Scrub-shrub
Scrub-shrub wetlands are defined as being dominated by woody vegetation less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions. This habitat type is noted adjacent to the outlet at Cedar Creek and adjacent to Willow and Cogswell Creek at both the inlet and outlet. A total of 21 locations within the ESL have this habitat type. Salix spp. are the dominant plants species.

Project Impacts
The proposed project would permanently impact about 0.26 acres and temporarily impact about 0.56 acres. Most direct impacts would be because of the roadway widening or the extension of culverts.

Permits
Waters (riverine) and riparian habitat identified within the project area are protected by state laws and regulations and Sections 401 and 404 of the federal Clean Water Act. Work within the bed and bank of various creeks and drainages would require a Nationwide Permit 14 from the Army Corps of Engineers, Water Quality Certification from the CVRWQCB, and a Lake or Stream bed Alteration Agreement from the California Department of Fish and Wildlife. Impacts to riparian vegetation would be addressed in the Lake or Stream bed Alteration Agreement. In addition, a Notice of Intent would need to be filed with the State Water Resources Control Board to obtain coverage under the NPDES General Construction Permit.

Special-Status Plant Species
Special-Status plants are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on site.

Survey Results
Based on database queries, initially 86 individual special-status plant species had the potential to occur within the ESL. After further evaluation, 19 of the 86 special-status plant species could potentially occur in the ESL. Of the 19 potential special-status plant species, none were observed within the project limits.

Special-Status Animal Species
Animals are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. No special status animals were observed on site. However, there is potential for the western bumble bee, Sierra Nevada yellow-legged frog, 8 bat species, and 8 migratory birds, to be present within the BSA.

Discussion of Bats
California has 25 bat species, 18 of which are rare and/or considered species of special concern by CDFW, species of special concern by the USFWS, or sensitive by USFS or BLM.
Bats roost in a variety of structures, including caves, manmade structures, rock crevices, cracks in the ground, mines, loose bark, tree cavities, and tree stumps in clear cuts (Kunz 1982; Manning and Jones 1989; Vonhof and Barclay 1996). Bats forage along forest edges, over riparian areas, along forest roads, and trails and in natural forest gaps or openings.

Survey Results
Surveys were conducted during the day; consequently, the lack of evidence does not preclude night roosts. Bats that night roost singly or in small groups may leave no visible sign. Humbug Creek Bridge has potential for night roosting, but no signs (urine, guano) were noticed during field reviews.

Studies on forest dwelling bats show that they prefer roosting areas opposed to a single tree. Furthermore, roosting areas include not one but many tall snags with early to medium stages of

decay within a small area. Snags within the ESL were surveyed for potential roosting bats. No evidence of bat use was observed. The ESL lacks multiple snags within proximity to each other.

Project Impacts
The lack of bat sign within the ESL indicates it is unlikely that trees within the ESL or the bridge are providing crevices for maternity roosts. No impacts to bat maternity roosts are anticipated as a result of this project.

Western Bumblebee
The western bumble bee (*Bombus occidentalis*) is a state species of special concern and managed as a USDA Forest Service sensitive species. Historically, western bumble bee was one of the most broadly distributed bumble bee species in North America, distributed along the Pacific Coast and westward from Alaska to the Colorado Rocky Mountains (Thorp and Shepard 2005). The western bumble bee currently occurs in California and all adjacent states but is experiencing severe declines in distribution and abundance due to a variety of factors including disease and loss of genetic diversity (Tommasi et al. 2004, Cameron et al. 2011, Koch et al. 2012).

Survey Results
Species specific surveys for western bumble bee were not conducted within the ESL because of the difficulty of identifying bumble bees without capture and microscope. However, suitable habitat occurs within the ESL and presence is assumed.

Project Impacts
Ground disturbing activities associated with the proposed project would likely reduce foraging opportunities for the western bumble bee in the ESL, however this reduction in foraging habitat likely would be temporary as flowering plants would sprout and regenerate post-project. Ground disturbing activities also may destroy suitable nesting and overwintering sites. This disturbance is considered minimal based on the amount of potential habitat within the footprint of the proposed project and the relative abundance of the surrounding suitable habitat. Adverse effects are not anticipated.

Migratory Birds
A species list was obtained from the Sacramento Fish and Wildlife Office which identified eight migratory bird species to evaluate. These include: bald eagle *(Haliaeeatus leucocephalus)*, Cassin's finch *(Carpodacus cassinii)*, golden eagle *(Aquila chrysaetos)*, olive-sided flycatcher *(Contopus cooperi)*, willow flycatcher *(Empidonax traillii)*, Williamson's sapsucker *(Sphyrapicus thyroideus)*, Lewis's woodpecker *(Melanerpes lewis)*, and rufous hummingbird *(Selasphorus rufus)*. In addition to these species, yellow-billed cuckoo *(Coccyzus americanus)* has potential to migrate through the area.

Survey Results
During field surveys, the existing habitat was assessed for potential migratory bird habitat. It was determined that the habitat within the ESL has a low use potential for migratory birds and does not contain suitable habitat for either olive-sided flycatcher, willow flycatcher, or yellow-billed cuckoo. The existing habitat consists of trees that have no structural attributes to support raptors (e.g. bald or golden eagles) or habitat suitable for water birds (e.g. ducks). Additionally, the trees within the ESL are located along SR 70 and are continuously exposed to high volume

of traffic and noise. A few dead tree snags were observed that could be potential habitat for Lewis's woodpeckers and Williamson's sapsuckers, but these trees were primarily outside of the ESL and are not anticipated to be impacted. Furthermore, most of the ESL has been previously disturbed or is rural residential front and backyards. No bird nests were observed during field surveys.

Project Impacts
Physical disturbance of habitat would be limited to the extent practicable with the proposed project, so habitat removal would be minor. While tree removal would be needed, most effects are limited to disturbance effects that are already encountered on a daily basis. As stated, the scope of work would require minor vegetation removal. However, the trees proposed for removal are located along SR 70 and are continuously exposed to high volume of traffic and noise, and they are considered lower quality habitat. Additionally, the ESL does not contain habitat suitable for raptors. Furthermore, no nests were observed during field surveys. Therefore, proposed tree removal activities are not anticipated to have a negative impact on migratory birds.

USFS Management Indicator Species
The Sierra Nevada Forests Management Indicator Species (SNF MIS) Amendment (USDA Forest Service 2007) identifies bioregional scale habitat and/or population monitoring for the Management Indicator Species for ten National Forests, including the Plumas NF. The habitat and/or population monitoring requirements for Plumas NF's MIS are described in the 2010 Sierra Nevada Forests Bioregional Management Indicator Species (SNF Bioregional MIS) Report (USDA Forest Service 2010) and are summarized below for the MIS being analyzed for the Cromberg Roadway Rehabilitation Report Project. The applicable habitat and/or population monitoring results are also described in the 2010 SNF Bioregional MIS Report (USDA Forest Service 2010a).

Aquatic Macroinvertebrates
Aquatic or Benthic Macroinvertebrates (BMI) were selected as the MIS for riverine and lacustrine habitat in the Sierra Nevada. They have been demonstrated to be very useful as indicators of water quality and aquatic habitat condition (Resh and Price 1984; Karr et al. 1986; Hughes and Larsen 1987; Resh and Rosenberg 1989). They are sensitive to changes in water chemistry, temperature, and physical habitat; aquatic factors of particular importance are: flow, sedimentation, and water surface shade.

Current Condition of the Habitat Factor(s) in the Project Area
Flow in most of the waterways is intermitted or ephemeral. Perennial waterways on USFS land in the project area include Cogswell, unnamed waterway (PM 66.58), unnamed waterway (pm 67.56), and Denten Creek. Flow is high only in unnamed waterway 67.58. The remained have intermediate to low depending on the year. Sedimentation is low. Moderate temporary or sporadic sedimentation probably occurs with the first rains or snow melt especially in the intermittent and ephemeral waterways that gather sediment and debris during the year. Natural shade is provided mostly by shrub and tree canopy cover, except for unnamed stream (PM 66.58), where recent utility work has removed all but two stands of cottonwoods. The current culverts provide abundant shade. This shade is provided at a height of a meter or more. Aquatic plants, algae, or emergent vegetation is lacking at many locations.

Direct and Indirect Effects to Habitat
Although project occurs within this habitat, it would not result in a change in these factors permanently (Table 8). No impacts or change are expected to occur at ephemeral or intermittent waterways, because they would be dry when work would be conducted. Incorporated BMP's would decrease the risks of chemical release into waterways. Most culverts would be upsized or just extended and would not affect the water flow or the ability of the waterway to flush sediment.

Approximately 0.1 acres of water is currently in culvert and would be temporarily impacted while the new culvert, culvert extension, or the culvert lining is conducted. Loss of natural bottom waterway would be about 0.01 acre, as this area would be newly confined to a culvert.

Indirect effects from sediment and turbidity could result from 1) vegetation removal; 2) dewatering the active channel; 3) installing/removing/extending a culvert for stream flow; 4) placing gravel for temporary stream crossing; 5) placement of RSP, and 6) placing a gravel work pad. These activities are anticipated to generate only localized sedimentation and turbidity and only for a short duration. Construction equipment activities are anticipated to minimally increase turbidity as equipment would either work directly on created gravel pads or the current roadway. Suspended sediments in perennial streams are predicted to not persist and dissipate by approximately 300 ft. downstream. Conditions would be similar to the first rain event or snow melt.

Cumulative Effects to Habitat in the Analysis Area
After initial construction, only maintenance of the culverts would occur as needed.

Cumulative Effects Conclusion
No cumulative effect to the habitat is expected based on the minimal amount of habitat being permanently impacted compared to the abundance of this habitat type in the area and project limits. There is no expected change in long term water flow. Water surface cover is insignificant and most of it is temporary as trimmed riparian vegetation regrows. Sedimentation is not expected to be different than normal circumstances in high elevation waterways. The Cromberg roadway Rehabilitation project would not alter the existing trend in the habitat or aquatic macroinvertebrates across the Sierra Nevada bioregion.

Yellow Warbler
The yellow warbler was selected as the MIS for riparian habitat in the Sierra Nevada. This species is usually found in riparian deciduous habitats in summer (cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland) (CDFG 2005). Yellow warbler is dependent on both meadow and non-meadow riparian habitat in the Sierra Nevada (Siegel and DeSante 1999).

Direct and Indirect Effects to Habitat
About 107 square feet of riparian loss is anticipated during this project. Another 1,896 square feet of temporary riparian impacts are anticipated (Table 9). Riparian removal is also in small increments over 20 miles. It is not occurring at one location. Therefore, removal is insignificant compared to the amount of suitable habitat along these waterways and within the area. Most riparian habitat would be trimmed or cut at the base to allow for quick regeneration. At some

locations, depending on design conditions, permits, and consultation with regulatory agencies willow or alders shoots may be replanted.

Cumulative Effects to Habitat in the Analysis Area
Other than maintenance activities that may trim revegetation near structures, cut grasses and vegetation along the roadway to allow vehicle to pull off the roadway, or remove hazard trees that could harm the traveling public, no work has been conducted in this area. Any future Caltrans project would further evaluate riparian habitat under NEPA and CEQA. Currently no local projects are known.

Cumulative Effects Conclusion
The change in deciduous canopy closure of 0.002 acres out of 2.44 acres of riparian habitat in the project limits would not alter the existing trend in the habitat , nor would it lead to a change in the distribution of yellow warblers across the Sierra Nevada bioregion.

Mountain Quail
The mountain quail was selected as the MIS for early and mid-seral coniferous forest (ponderosa pine, Sierran mixed conifer, white fir, red fir, and eastside pine) habitat in the Sierra Nevada. Early seral coniferous forest habitat is comprised primarily of seedlings (<1" dbh), saplings (1"-5.9" dbh), and pole-sized trees (6"-10.9" dbh). Mid-seral coniferous forest habitat is comprised primarily of small-sized trees (11"-23.9" dbh). The mountain quail is found particularly on steep slopes, in open, brushy stands of conifer and deciduous forest and woodland, and chaparral; it may gather at water sources in the summer, and broods are seldom found more than 0.8 km (0.5 mi) from water (CDFG 2005).

Direct and Indirect Effects to Habitat
Although the project occurs within this habitat, it would not result in a change in any of these factors. Few trees would be removed to accommodate a large clear recovery zone. More information would be available as design finalizes the roadway work limits. Currently, it is expected that less than 100 individual trees would be removed on Forest Service lands. Actual acreage would be identified after the project limits is cruised for timber.

Cumulative Effects to Habitat in the Analysis Area
Other than maintenance activities that may remove a hazard tree or one that has naturally fallen, no work has been conducted in this area. Any future Caltrans project would further evaluate riparian habitat under NEPA and CEQA. Currently no local projects are known.

Cumulative Effects Conclusion
The loss of early and mid-seral habitat in the region is insignificant and would not alter the existing trend in the habitat , nor would it lead to a change in the distribution of mountain quail across the Sierra Nevada bioregion.

Threatened and Endangered Species

Sierra Nevada yellow-legged frog (SNYLF)

Description
The SNYLF is a highly aquatic, medium-sized (1.5 - 3.25 inches) frog (Stebbins and McGinnis 2012). Females tend to be larger than males. Adult SNYLF are variable in body color from olive, brown, and yellow with dark markings. The belly and underside of their back legs

(sometimes their front legs) are pale orange to yellow (Stebbins and McGinnis 2012). When disturbed or threatened, SNYLF can produce a mink or garlic-like odor. Tadpoles are dark brown with a faintly yellow under side (Stebbins and McGinnis 2012).

Range
The SNYLF occupy the western Sierra Nevada's North of the Monarch Divide (in Fresno County) and the eastern slope of the Sierra Nevada (east of the crest) from Inyo County (Independence Creek) to Mono County (including the Glass Mountains). They occur as far north as Butte and Plumas Counties with most known populations occurring on publicly managed lands at high elevations (CDFW 2011, Jennings and Hayes 1994, USFWS 2014). Populations are found from 3,500 feet (4,500 m) to over 12,000 feet (3,651 m) in elevation (Jennings and Hayes 1994). At lower elevations, SNYLF can have contact zones with foothill yellow-legged frog (Rana boylii) and may hybridize at very low levels, contrary to what Zweifel (1955) found in experiments (Peek et al. 2019).

Habitat
The SNYLF is associated with numerous habitat types, reaching their highest densities in large, deep standing-water habitats (Knapp 2005). Other habitats include perennial and intermittent streams, and ponds in montane riparian forest, lodgepole pine forest, subalpine conifer forest, and wet meadow habitats (Zweifel 1955). SNYLF are not typically associated with small creeks because these types of watercourses lack deep pools and runs needed for refuge and overwintering (Jennings and Hayes 1994). The daily activity cycle is often basking and foraging near the shore then move to deeper water for the night (Bradford 1984, Wengert 2008). Overwintering occurs underwater (Vredenbrun et al. 2005). Overwinter habitat includes stream and lake bottoms, creek banks, near-shore bedrock, crevices, and springs. The overwintering period is typically between 6-9 months. The water body of lakes and ponds should be a minimum water depth of about 6 feet, but deeper depth may increase survival as it reduces no-oxygen conditions (Vredenburg et al. 2005).

The entire project limits were surveyed for habitat that would be suitable for Sierra Nevada yellow-legged frog. Fourteen of the 23 intermittent and perennial streams within the project limits were determined to be *Suitable Habitat* and could potentially support the presence of Sierra Nevada yellow-legged frog.

More information on Sierra Nevada yellow-legged frog and its habitat can be found in the Biological Assessment dated 4/21/21 on file with Caltrans, District 2. A Letter on Concurrence dated May 6, 2020, has been received from the US Fish and Wildlife Service which supports this determination.

Critical Habitat
No designated critical habitat exists in the project limits.

Essential Fish Habitat
A review of the National Oceanic and Atmospheric Administration's (NOAA) Essential Fish Habitat (EFH) database and GIS data was conducted to provide information on EFH locations and were found to not be applicable to this project.

Invasive Species
Seven state-listed noxious weeds were encountered during field surveys. Five species: yellow starthistle, bull thistle, Canada thistle, Scotch broom, and medusahead rye are considered "C-rated species." C-rated weeds are widely spread throughout northern California with no current

possibility of control. Two species jointed goatgrass and perennial pepperweed are “B-rated species” rated. B-rated species are can be subject to eradication, containment, or control. No project activities are anticipated to contribute to the spread of these species.

CEQA Determination

The project would have a less than significant impact to candidate, sensitive, or special-status species, riparian habitat or other sensitive natural communities, wetlands, and the movement (migration) of any native resident or migratory fish or wildlife species.

The proposed project would not conflict with any local policies or ordinances protecting biological resources, or conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Avoidance, Minimization, and/or Mitigation Measures

- At locations with frog suitable habitat, in-water work would be limited to the period between June 1 and October 15 when the potential for SNYLF to occur onsite is reduced or unlikely because flows are low or dry.
- At locations where suitable frog habitat is present, an approved biologist would inspect the work area prior to the start of work.
- Erosion control would be applied to disturbed soil areas prior to October 15.
- BMP’s would be implemented in the project to minimize impacts to waterways.
- Loss of riparian habitat would be minimized within the project through preserving existing vegetation to the maximum extent possible and revegetating disturbed areas to establish permanent riparian cover.
- The contractor shall follow the terms and conditions of the permits that regulate riverine and riparian areas. Permits would be obtained from CDFW, CVRWQCB and USACE.
- In accordance with Caltrans’ non-standard specification 14-6.05, prior to beginning work, the contractor shall prepare an invasive species control plan that identifies measures to be implemented to prevent the introduction and/or spread of invasive species (e.g., noxious weeds). The invasive species control plan shall be approved by Caltrans environmental staff and implemented prior to beginning work.
- To avoid disturbing nesting birds, tree and shrub removal shall be restricted to the period between October 1 and January 31. If this is not practicable, a contractor-supplied biologist shall conduct a preconstruction survey for nesting birds within 3 days prior to removing trees and shrubs. If an active nest is discovered, the contractor supplied biologist shall recommend the appropriate measures to prevent disrupting the nest.

3.4 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 (NRHP). 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 (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 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 Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. The ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

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. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)[2] between the Department and SHPO,

[2] The MOU is located on the SER at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf

effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA satisfies the requirements of PRC Section 5024.

Affected Environment

A Positive Archaeological Survey Report and a Historic Property Survey Report was completed on October 2020 and is on file with Caltrans, District 2. A summary of the information collected and the conclusions are discussed below.

A historic resources inventory was conducted for the Area of Potential Effects (APE) defined for the project. Background research included a record search at the Northeast Information Center (NEIC) of the California Historical Resources Information System and correspondence with the Native American Heritage Commission (NAHC) and Native American groups and individuals.

The archaeological fieldwork involved a systematic pedestrian survey of the entire APE and was conducted over several days in October 2019 and January 2021. The purpose of these efforts was to identify and evaluate any cultural resources that may exist within the project area, and to assess any effects that the proposed project might have related to the cultural resources.

Caltrans identified 12 cultural resource sites within the project area. All of the all sites have been previously discovered and recorded. Of the 12 sites, 5 locations are historic resources, 4 locations are prehistoric resources and 3 locations are multi component resources. All of the resources were evaluated for this project, and were determined to be exempt from evaluation. These are noted below.

Exempt Resources

Of the cultural resources located within the APE, one historic resource was determined to be category of property that does not warrant evaluation pursuant to Stipulation VIII.C.1 of the Section 106 PA Attachment 4 (**Properties Exempt from Evaluation**).

- **P-32-003019:** Isolated can scatter including glass and metal fragments.

These isolated finds are exempt from evaluation and do not warrant further recordation. They are considered to be categorically ineligible for inclusion in the NRHP and are not historical resources under CEQA, per CEQA guidelines §15064.5, nor are they considered to be eligible for the California Register of Historical Resources or as a California Historical Landmark.

Resources Assumed Eligible in Consultation with Caltrans Cultural Studies Office

P-32-002684 (FS 05-11-51-935)

Originally recorded in 1972, the site consists of two occupations: an earlier mining occupation, and a later California Conservation Camp (CCC) activity. The CCC activity was identified

because of the features this resource shares with the Jackson Creek Campground (FS 05-11-51-675) north of SR 70. Twelve features are identified, at this historic resource and include: fire hearths, trash scatters, ditches, and rock alignments. This site has previously been determined eligible to the NRHP by a consensus through the Section 106 process undertaken by the USFS.

P-32-002657 (FS 05-11-51-0675, CCC Project Complex, USFS Guard Station)

Originally recorded in 1989 the site includes stacked rock alignments, concrete hearths, a phone line, spring, and previous road segments. This site is a Forest Service and California Conservation Corps campground. The USFS Guard Station was reported to be in the area, but little evidence of this station can be noted currently. One small hearth is noted within the current Caltrans ROW. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-002652 (FS 05-11-51-0669)

This site includes a sparse can and debris scatter situated on a ridge located on the northeast side of SR 70. The site is thought to be a Plumas Lumber Company camp dating from 1918-1920 with artifacts including bedsprings, milled wood, metal scraps, and fragments of cans, glass, and ceramics. The site is disturbed from bulldozer activity and a utility pole that was placed within the concentration. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-002683

This historic resource includes a large can scatter and associated debris material. The site has three defined loci with a scattering of debris between each, including a small depression filled with historic glass and tin cans brick rubble, and a very large can scatter. All three loci are outside of the Caltrans ROW. The site has been continuously monitored by the Forest Service and is associated to nearby historic resources P-32-002684, P-32-002657, and P-32-002652. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-002642 (FS 05-11-51-0449)

Forest Service site 05-11-51-449 is can scatter. Originally recorded in 1982 as a multi-component site with five separate loci, the site was subsequently separated into two sites as the result of a 2004 update. The prehistoric component, previously identified as Locus D, has now been identified as FS 05-11-51-1079 and is well beyond the current Caltrans ROW. When recorded in 2000 2000 by Pacific Legacy, Inc. during the ISTEA Rural Roadside Inventory, the historic component of interest here was described as a can scatter of approximately 100 cans, with 80% of the cans comprised of matchstick filler embossed with “PUNCH HERE”. This was confirmed in the 2020 surveys. This site is assumed eligible for the purposes of this project. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-003017

This site is described as a multi-component site including a prehistoric lithic scatter and a historic ditch segment. As recorded in 2000 by Pacific Legacy, Inc. during the ISTEA Rural

Roadside Inventory, the prehistoric component included a scatter of approximately 20 flakes, two projectile points, and one biface. Most of the flakes noted were basalt, with only one white chert flake and a single obsidian flake. 90% of the flakes were found on the northeast side of the highway in exposed areas within 5-7 meters of the highway. A white chert projectile point tip and basalt biface were located. A stemmed basalt projectile point was found. No cultural materials were relocated during this inventory. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-000250

This prehistoric site consists of a debitage scatter and has undergone numerous data collection efforts. The site was first excavated in 1978 for as Extended Phase 1 during a Caltrans highway realignment project and determined eligible to the NRHP by a consensus through the Section 106 process (Jensen 1978). The site was described as a scatter of basalt and chalcedony flakes, including at least one basalt flake and several basalt scrapers. The site was described as being expansive, and could not be avoided by the highway realignment. Six test units were placed, and most of the artifacts were identified within the initial 20 centimeters of deposit. However, the site had been impacted by extensive disturbance with material drift explained by root movement, rodents, and previous railroad work. Then in 1980 and in conjunction with the same highway realignment, 100% surface collection of the site was undertaken (Farber 1980).

Most recently the site was recorded in 2000 by Pacific Legacy, Inc as part of the ISTEA Rural Roadside Inventory. Only a few basalt flakes were relocated during this site visit. Current pedestrian surveys did not indicate cultural material present, and, the current fill prism effectively buries large portions of the site.

P-32-003016

Last recorded in 2000, the site is described as consisting of 15-25 basalt flakes along approximately 100 meters of road margin with extensive disturbance. During the 2019 survey, basalt flakes were identified consistent with the previous site record. No additional artifacts were relocated along the side of S 70. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-000110 (FS 05-11-51-0063)

The site was originally recorded in 1972 as widespread sparse prehistoric lithic scatter situated on a low finger ridge and primarily outside of the Caltrans ROW. Pacific Legacy, Inc. updated the site in 2000 as part of the ISTEA Rural Roadside Inventory and identified between 5 and 10 basalt flakes within the Caltrans ROW. During the 2019 survey this same small flake scatter was relocated. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-001707

The site was originally recorded and tested as part of Caltrans' encroachment permitting process. Prehistoric artifacts identified included basalt debitage, basalt biface fragments, fire affected rock, midden deposits, and freshwater shell. The prehistoric component is described as a large but sparse basalt lithic scatter with two concentrations of material within the ROW. Testing results in the 1980's identified a lack of integrity.

Pacific Legacy, Inc. updated the site as a large lithic scatter in 2000 as part of the ISTEA Rural Roadside Inventory. The site area within the Caltrans ROW included an extensive lithic scatter of primarily dark, fine grained basalt (98%) chert (1%), and obsidian (1%) flakes.

In 2006, an Extended Phase I testing effort was implemented as part of the project development process. This documented that portions of the resource within the hinge points have been destroyed and removed by previous construction activities (Walsh 2006). However, some areas were found to include surface and subsurface cultural materials.

The historic component of the resource has been included over time, and is outside of the Caltrans ROW and project APE. Although in-depth recording of the "Old Clairville School" and outbuilding were not completed, a historic trash scatter containing glass and crockery fragments, metal cans were noted outside the ROW.

The 2019 survey was limited to the Caltrans ROW and three chipped lithic concentrations and a single Elko Side Notched Projectile Point. Approximately 50 chipped stone artifacts were identified - primarily fine-grained basalt debitage with a few white chalcedony flakes. Additionally, distinctively darker, midden-like sediments were observed. To the north a more diffuse scatter of both historic materials as well as chipped stone were noted. No midden-like sediments were evident. This site is assumed eligible to the NRHP for the purposes of this project.

P-32-000231

Originally recorded during a survey in 1976 as a shallow midden with basalt points, flakes, and cores. Severe impacts to the resource were noted due to construction developments. Pacific Legacy, Inc. updated the site as a lithic scatter (20-30 flakes) in 2000 as part of the ISTEA Rural Roadside Inventory. In 2004 the site record was updated during Caltrans' encroachment permit process. A portion of the site was again noted as destroyed, and some cultural materials were identified. The 2019 survey confirmed the location of these chipped stone materials.

Environmental Consequences

All of the cultural resources discussed above would either be outside of the construction area or they would be protected with ESA fence and unaffected by construction activity. Caltrans staff and Native American monitors would be overseeing construction activities near the cultural resource sites to ensure they remain undisturbed.

It is anticipated the proposed project would result in a Finding of No Adverse Effect without Standard Conditions. The State Historic Preservation Officer (SHPO) is expected to concur with this finding by July 12, 2021.

CEQA Determination

The proposed project would have less than significant impacts to cultural resources.

Avoidance, Minimization, and/or Mitigation Measures

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

- Additional archaeological surveys would be required if project limits are extended beyond the present survey limits.

- Caltrans staff and Native American monitors would be overseeing construction activities near the cultural resource sites to ensure they remain undisturbed.

3.5 Energy

Regulatory Setting

National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

Energy Policy Act

The federal Energy Policy Act (EPA) addresses energy production in the United States, including: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Tribal 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. For example, the Act provides loan guarantees for entities that develop or use innovative technologies that avoid the by-production of greenhouse gases. Another provision of the Act increases the amount of biofuel that must be mixed with gasoline sold in the United States.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) Guidelines section 15126.2(b) and Appendix F, Energy Conservation, require an analysis of a project's energy use to determine if the project

may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

Affected Environment

A project-level analysis of energy uses data to derive project energy consumption. Energy in a resource context generally pertains to the use or conservation of fossil fuels, which are a finite resource. Transportation energy is generally described in terms of direct and indirect energy, defined as follows:

Environmental Consequences

Direct Energy Consumption (Mobile Sources)

The proposed project would not increase capacity or provide congestion relief when compared to the no-build alternative. It is unlikely to increase direct energy consumption on mobile sources.

Site preparation and roadway construction would land clearing/grubbing, roadway excavation/ removal, structural excavation/removal, base/subbase/imported borrow, structure concrete, paving, drainage/environment/landscaping, and traffic signalization/signage/stripping/painting. During construction, short-term fuel consumption is expected by various operation. Fuels for construction equipment would be largely powered by gasoline and diesel. Construction activities are expected to increase traffic congestion in the area, resulting in increases in fuel consumption from traffic during the delays. This consumption would be temporary and limited to the immediate area surrounding the construction site.

The basic procedure for analyzing direct energy consumption from construction activities is to obtain fuel consumption projections in gallons from the Caltrans Construction Emission Tool (CAL-CET). Construction energy consumption was estimated using the Caltrans' Model, CAL-CET2018 (version 1.3). Construction-related fuel consumption by operation and annual for the proposed project were calculated in an Energy Analysis Report (Caltrans 2020) completed for the project. The energy consumption presented is based on the best information available at the time of calculations. The energy represents the construction fuel consumption.

The proposed project construction would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, and debris hauling. Energy use associated with proposed project construction is estimated to result in the short-term consumption of 120,414 gallons for the build alternative from diesel-powered equipment and 72,271 gallons for the build alternative from gasoline-powered equipment. These represent small demands (approximately diesel: 0.5%; gasoline: 0.08%) on Shasta County's gasoline and diesel sales estimates (i.e. 24 million of diesel gallons and 87 million of gasoline gallons in 2018) that would be easily accommodated, and this demand would cease once construction is complete.

Direct Energy Consumption (Construction)

The basic procedure for analyzing direct energy consumption from construction activities is to obtain fuel consumption projections in gallons from the CAL-CET2018, version 1.3. CAL-CET outputs fuel consumption based on project-specific construction information.

Proposed project construction would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, and debris hauling. As indicated above, energy use associated with proposed project construction is estimated to result in the total short-term consumption of 238,479 gallons from diesel-powered equipment and 154,442 gallons from gasoline-powered equipment. This demand would cease once construction is complete. Moreover, 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. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy.

Indirect Energy

The proposed project does not include additional maintenance activities which would result in long-term indirect energy consumption by equipment required to operate and maintain in the roadway. It would reconstruct approximately 20 miles of highway with a 20-year design life. As such, it is unlikely to increase indirect energy consumption though increased fuel usage

CEQA Determination

The proposed project would have a less than significant impact on energy resources.

Once constructed, the project may contribute to roadway improvement that would improve the fuel economy of vehicles. Construction-related energy consumption would be temporary and is unlikely to substantially increase direct energy consumption through increased fuel usage. Therefore, 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. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Avoidance, Minimization, and/or Mitigation Measures

Energy Saving Measures (Construction)

The guidance in section 15126.2(b) and Appendix F of the CEQA Guidelines, Energy Conservation provide feasible conservation measures during construction. While construction would result in a short-term increase in energy use, construction design features would help conserve energy.

The following measures shall be implemented when practical:

- Use recycled and energy-efficient building materials, energy-efficient tools and construction equipment, and renewable energy sources in construction and operation of the project.

- Improve operations and maintenance practices by regularly checking and maintaining equipment to ensure its functioning efficiently.
- Optimize start-up time, power-down time, and equipment sequencing.
- Revise janitorial practices to reduce the hours that lights are turned on each day.
- Visually inspect insulation on all piping, ducting and equipment for damage (tears, compression, stains, etc.).
- Educate employees about how their behaviors affect energy use.
- Ensure that team members are trained in the importance of energy management and basic energy-saving practices. Hold staff meetings on energy use, costs, objectives, and employee responsibilities.

3.6 Geology and Soils

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

Affected Environment

The proposed project is located in the southeastern portion of Plumas County, which ranges from forested hillsides on the west end, to relatively flat topography towards the east end. Landslides are uncommon in this part of the county. A review of aerial photographs found no evidence of large landslides within or adjacent to the project limits. Given that that the topography within the project area has moderate to gentle slopes and there is no history of highway repairs due to landslides or subsidence within the project area, the soils are presumed to be relatively stable.

The proposed project is not located in an area that has a known active earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map (California Department of Conservation 2020d). The project area is not in an area characterized by seismic-related ground failure and/or liquefaction (California Department of Conservation 2020f).

Predominant soil types throughout the project area include Redding, Clough, Churn, Gaviota, and Newtown (Natural Resources Conservation Service 2020). All these soils have low infiltration rates. Potential for erosion does occur.
Expansive soils present hazards for development because they expand and shrink depending on water content. A hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The Natural Resource Conservation Service recognizes four hydrologic soil groups (A through D). Group D soils have a high shrink-swell potential due to their high clay content. All fall in the Hydrologic Group D except Newton, which falls in Group C. However, the current roadway is on fill from soil groups outside of Group D.

Environmental Consequences

Although the roadway could be subjected to moderate seismic ground shaking in the event of a strong earthquake, any such limitations can be overcome through proper planning, design, and/or construction. The proposed work includes grading and excavation, which would disturb 20 miles of roadway (approximately 106 acres). Widening of the highway with cuts and fills along the alignment have the potential to cause soil erosion and may result in the loss of a small amounts of soil until the slopes, banks, and temporary access roads are fully stabilized.

CEQA Determination

The proposed project would have a less than significant impact on geology and soils.

The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic-related ground failure (including liquefaction), and landslides. The proposed project is not located on a soil that is unstable or that would become unstable because of the project and potentially result in onsite/offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. There are no expansive soils present within the project area. The proposed project does not include the use of septic tanks and/or alternative waste water disposal systems and would not directly or indirectly destroy a unique paleontological resource/site or unique geologic feature. The project may result in the loss of a very small amount of soil, but this quantity would not constitute a substantial loss of soil. The roadway rehabilitation project would be designed in accordance with current seismic safety standards and standard BMPs for erosion control would be implemented during construction.

Avoidance, Minimization, and/or Mitigation Measures

- The new roadway shall be designed in accordance with current seismic safety standards as applicable.

- Standard construction best management practices for erosion control and spill prevention shall be implemented.

3.7 Greenhouse Gas Emissions and 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 (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF6), and various hydrofluorocarbons (HFCs). CO_2 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 CO_2.

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 includes 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 [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to deciding 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 USC 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 based on 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. EPA 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. Fuel efficiency standards directly influence GHG emissions.

State

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

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

Assembly Bill (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 EO 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.

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

Senate Bill (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 achieves 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.

EO 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.

EO 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 ($MMTCO_2e$).[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 EO 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.

SB 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.

SB 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.

EO 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.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

[3] GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

Environmental Setting

The proposed project is in an area with a mixture of public and private open space, forest lands and rural residential development. Natural resources, recreation, and tourism are the basis of the economy. Highway 70 is the main transportation route through the area for both passenger and commercial vehicles other than Forest Service Routes and local roads. The Plumas County Transportation Commission (PCTC) guides transportation development is the project area.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period, 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. U.S. EPA 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 U.S. EPA 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 CO_2, CH_4, N_2O, HFCs, perfluorocarbons, SF6, and nitrogen trifluoride. It also accounts for emissions of CO_2 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 CO_2, 10% are CH_4, and 6% are N_2O; the balance consists of fluorinated gases (EPA 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

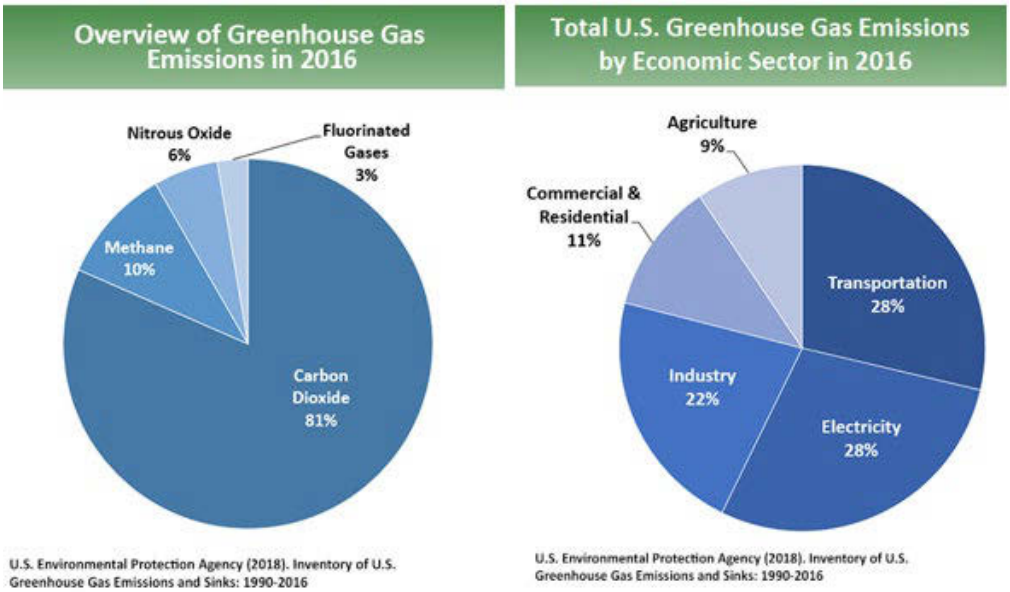

Figure 2. U.S. 2016 Greenhouse Gas Emissions

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 $MMTCO_2e$ 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).

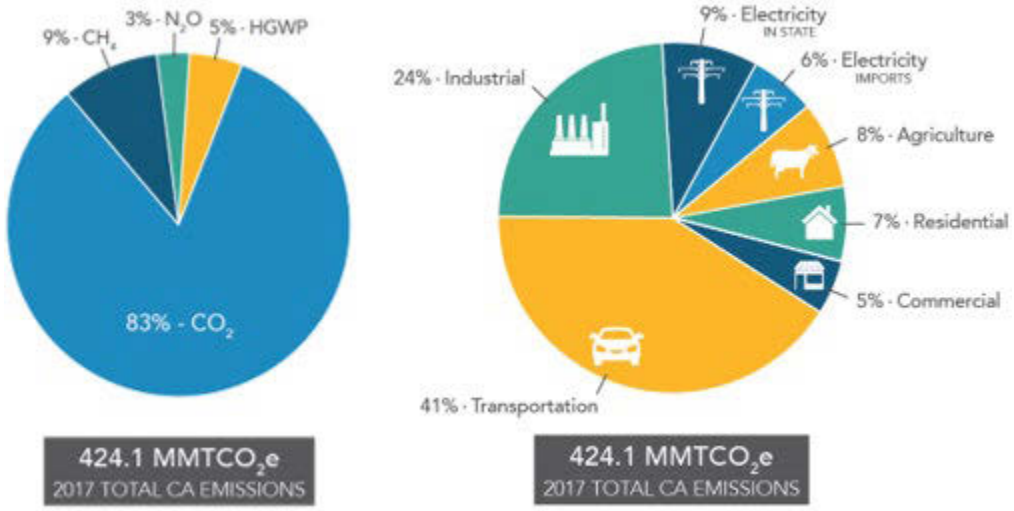

Figure 3. California 2017 Greenhouse Gas Emissions

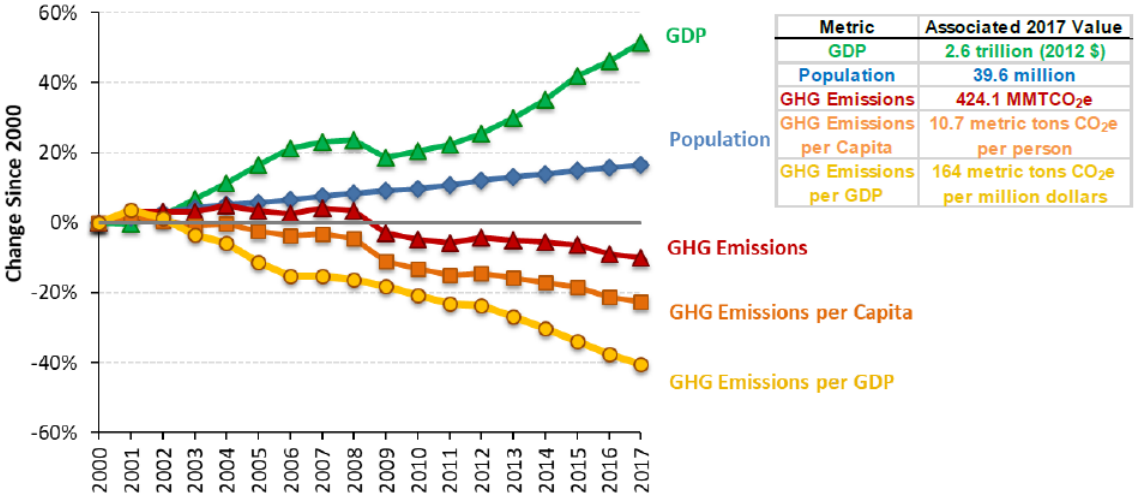

Figure 4. Change in California GDP, Population, and GHG Emissions since 2000

(*Source*: ARB 2019b)

AB 32 required ARB to develop a Scoping Plan that describes the approach California plans to 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 EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California plans to use to reduce GHG emissions.

Regional Plans

ARB sets regional targets for California's 18 metropolitan planning organizations (MPO) to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that would cumulatively achieve GHG reduction goals. Plumas County, however, is not within the jurisdiction of an MPO and does not have GHG reduction targets established by ARB. The proposed project is within the jurisdiction of the PCTC, the regional transportation planning agency for the County. PCTC prepares an RTP; it is not required to prepare a sustainable communities strategy because it is not an MPO.

The *2020 Plumas County Regional Transportation Plan* was adopted on January 27, 2020. It includes goals and policies to maintain a safe, efficient roadway system, reduce VMT and GHGs, and support active transportation. For example, Policy 6.1.4, GHG Reduction Goals, is to meet the GHG reduction goals set by CARB and AB 32 through coordinated land use and transportation planning and a reduction in VMT. Goal 6.2 is to avoid, minimize, or mitigate impacts to the environment (Plumas County Transportation Commission 2020).

Project Analysis

GHG emissions from transportation projects can be divided into those produced during normal operation of the highway and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH_4 and N_2O 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 proposed project would resurface and rehabilitate a portion of Highway 70 within project limits, add paved shoulders, and replace or extend culverts. The project would not change the capacity of the roadway, vehicle miles traveled, travel demands or traffic patterns when compared to the no-build alternative. Traffic volumes, composition, and speeds would remain the same. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is anticipated.

Construction Emissions

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

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.

GHG emissions during construction were estimated using CAL-CET2018 (version 1.3). Project construction is expected to result in approximately 4,910 metric tons of CO_2e (CO_2, CH_4, N_2O, and HFCs)[4] during up to 360 working days over 3 construction seasons. The model estimates emissions generated by on-site equipment for the project and does not include emissions from vehicles idling during one-way reversing traffic control delays that could last from 20 to 30 minutes each.

In accordance with Caltrans Standard Specifications, the contractor must comply with all ARB, Northern Sierra Air Quality Management District rules, ordinances, and regulations for air quality, such as idling time restrictions and proper engine maintenance. Measures that reduce vehicle exhaust during construction help reduce GHG emissions.

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 would 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.

[4] A quantity of GHG is expressed as carbon dioxide equivalent (CO2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFCs by its global warming potential (GWP). The GWPs of CO_2, CH_4, N_2O, and HFCs are 1, 25, 298, and 14,800, respectively.

CEQA Determination

The project would have a less than significant impact to greenhouse gas emissions.

While the proposed project would result in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, 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.

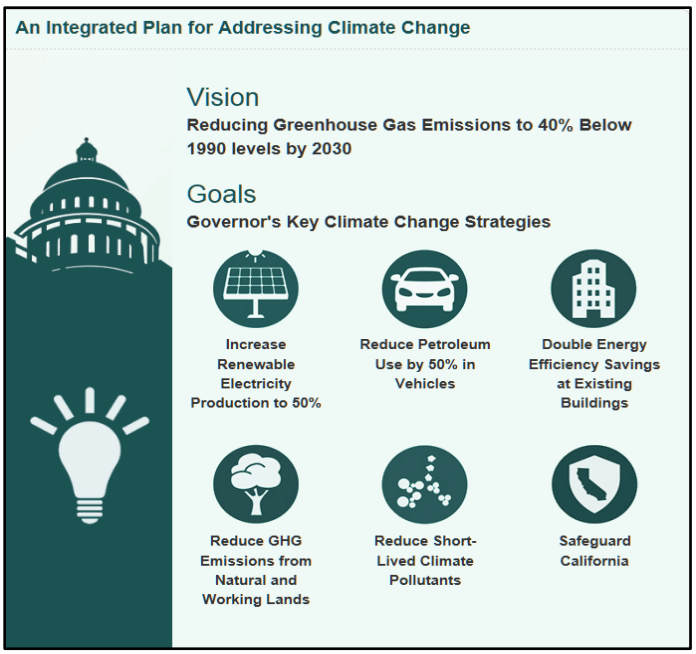

Figure 5. California Climate Strategy

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 would come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing greenhouse gas 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 EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set 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 CO_2 reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California

would 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 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 ensures 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 shall be implemented to reduce GHG emissions and potential climate change impacts:

- The construction contractor shall 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 Plumas County Air Quality Management District regulations and local ordinances.

- Compliance with Title 13 of the California Code of Regulations, which includes idling restrictions on construction vehicles and equipment to no more than 5 minutes.

- Compliance with Caltrans Standard Specifications 7-1.02A and 7-1.02C “Emissions Reduction.”

- Utilize a traffic management plan to minimize vehicle delays.

- To the extent feasible, construction traffic shall be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

- Earthwork would be balanced, which would avoid the need to transport fill from outside the project area.

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 slide after a fire. Effects 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).

The 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.2 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.

EO 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.

EO 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.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of EO 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 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

SEA LEVEL RISE

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

FLOODPLAINS

The Middle Fork Feather River flows along the southern side of SR-70 in the project area at varying distances from the highway. Several named watercourses, including Humbug Creek, and unnamed watercourses flow through the project area. Stormwater runoff from the project site is conveyed by roadside ditches, inlets and culverts. The project would introduce more than 1 acre of new impervious surface distributed along the 20-mile length of road within project limits.

Drainage from the added impervious surfaces would flow toward various watercourses. The hydrology analysis assumes the project is within a 100-year floodplain and that flow increases at each individual watercourse would be relatively small.

The Caltrans District 2 Climate Change Vulnerability Assessment mapped potential changes in 100-year storm precipitation depth throughout the district. The 100-year storm is a metric used in highway design. The 100-year storm precipitation depth in the project area is anticipated to increase by up to 10% in 2025 through 2055, depending on location. The Western Regional Climate Center reports average annual precipitation at Portola from 1915 to 2016 was about 20.5 inches. Most occurred from December through March, averaging about 3.3 inches per month. However, the area also received almost 13 inches of snow each month during that same time period, while temperatures ranged from the teens to the 40s or low 50s Fahrenheit (Western Regional Climate Center 2012). This suggests that snowmelt could contribute to runoff in addition to precipitation during these winter months.

Drainage work is planned for as many as 139 culverts, including replacing up to 75 of them, lining some, and clearing others of sediment and debris. All replaced culverts would be sized to meet current standards and upsized as needed Stormwater treatment BMPs such as bioswales, bio-strips, and infiltration and detention basins would capture or slow stormwater runoff. Temporary and permanent erosion control measures would stabilize disturbed areas to reduce risk of landslides during rain events. It is expected that the proposed roadway rehabilitation, drainage improvements, and stormwater treatment features would protect the roadway throughout its 20-year design life.

WILDFIRE

Most of the project limits are within an area that is designated as “Very High” for fire hazard severity according to CalFire, Fire Hazard Severity Zone mapping (Cal fire 2020). The District 2 Caltrans Climate Change Vulnerability Assessment maps the project area as exposed roadway

throughout the project lifetime (20 years). Caltrans Climate Vulnerability Assessment mapping shows it to be in an area of very high level of wildfire concern in 2025, with level of concern decreasing to “high” in a portion of the project area by 2055. The proposed project would increase the width of the road, which improves its function as a firebreak; would reduce vegetation adjacent to the roadside; and would provide additional paved areas for emergency response vehicle staging. Construction materials would be non-combustible such as asphalt and steel. All sources of electrical power would either be underground or contained in conduit and meet current electrical, building, and fire code, standards. The proposed project would not introduce additional infrastructure or housing that may exacerbate fire risk or result in temporary ongoing impacts to the environment. To reduce fire risk during construction, Caltrans 2018 revised Standard Specification 7-1.02M(2) mandates fire prevention procedures, including a fire prevention plan. The project is not anticipated to exacerbate the impacts of wildfires intensified by climate change.

3.8 Hazards and Hazardous 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 (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976. The purpose of CERCLA, often referred to as “Superfund,” is to identify and cleanup 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)

In addition to the acts listed above, Executive Order (EO) 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 cleanup 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 cleanup of 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 and Environmental Consequences

A Hazardous Waste Initial Site Assessment would be completed during the design phase of the project (phase 1). The study is anticipated to include findings such as:

1. **Aerially deposited lead (ADL)** from the historical use of leaded gasoline, exists along roadways throughout California. Caltrans anticipates soils adjacent to the roadway would have elevated concentrations of lead as a result of ADL.

   Soil found to contain lead concentrations exceeding the thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met. It would be determined in Phase 1 of project development, whether an ADL site investigation with soil testing would be required. If it is determined that aerially deposited lead exists within the project limits and would be disturbed during construction, contract specifications related to excavation, management, and disposal of ADL soils would be included in the construction contract.

2. **Lead Containing Paint (LCP)**--LCP may be present on the structures that would be widened/demolished. As a result, a structural survey with sampling and testing of existing paint would occur in Phase 1 of the project development to access the presence and extent of LCP so that specifications can be included in the contract. The specifications, if necessary, would address health and safety, removal, handling, containment, and disposal of LCP.

3. **Asbestos Containing Material (ACM)**—ACM may be present on the structures that would be widened/demolished. As a result, a structural survey with sampling and testing of suspect bridge components would be conducted in Phase 1 to access the presence and extent of ACM so that specifications can be included in the construction contract to ensure proper handling. The specifications, if necessary, would address health and safety, notification, removal, handling, containment, and disposal of ACM.

4. **Paint and Thermoplastic Striping Containing Lead**- The project would likely involve pavement grinding. The residue would likely have non-hazardous levels of lead from the paint and thermoplastic striping that is removed with the pavement. In addition, the project may also involve striping removal separate from pavement cold planing and grinding.

Specifications would be included in the construction contract for handling and disposing traffic paint and striping. The contractor would be required to prepare a lead compliance plan.

5. **Treated Wood Waste** - The project would remove and dispose of treated wood waste (TWW) from existing guardrail and roadside sign wood posts, the project would require specifications to address disposal of these items. These wood products are typically treated with preserving chemicals that may be hazardous (carcinogenic) and include, but are not limited to arsenic, chromium, copper, creosote, and pentachlorophenol. The contract specification provides requirements for handling, storing, transporting, and disposing of treated wood waste.

6. **Naturally Occurring Asbestos (NOA)-** There is no known NOA within the project limits based upon geologic mapping and previous hazardous waste studies carried out within project area.

7. **Cortese List -** The project limits are adjacent to properties that are considered a listed hazardous waste site (Cortese List site) due to underground storage tanks. However, this project would take place within the existing highway easement and would not acquire land from any property that is on the Cortese List. All of the locations are considered to be in compliance with applicable regulations concerning hazardous waste. Standard specifications in the construction contract would ensure there is no exposure hazard to the public as a result of the project.

CEQA Determination

The proposed project would have a less than significant impact on hazards and hazardous materials.

The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, nor would it 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. Construction of the project would require the use of materials that could be considered hazardous.

The project would not expose construction workers at the project site to a safety hazard or excessive noise.

The proposed project would not impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan. In the event of an emergency during construction, Caltrans would coordinate with the California Highway Patrol to resolve any traffic-related concerns. Once constructed, the project would improve conditions during emergency response and emergency evacuations in the project area.

The proposed project does not expose people or structures to additional risk of loss, injury, or death as a result of wildfire by using the existing highway.

Avoidance, Minimization, and/or Mitigation Measures

- Grindings associated with removal of yellow and white traffic striping would be removed and disposed of in accordance with Caltrans SSP 36-4. Any treated wood sign posts that are removed would be disposed of in accordance with Caltrans SSP 14-11.14.

- A site investigation for aerially deposited lead and asbestos would be conducted in the design phase (phase 1) of the project to determine whether hazardous soils/asbestos are present and what actions, if any, would be required.

- The project contract would include SSP 14-11.14. The SSP provides requirements for handling, storing, transporting, and disposing of treated wood waste.

- The contract would require that the contractor prepare a lead compliance plan.

- A specification(s) related to excavation, management, and disposal of ADL soils would be included in the contract if needed.

- If asbestos containing materials are identified in the 1 Phase, specifications would be included in the construction contract to address health and safety, notification, removal, handling, containment, and disposal of ACM.

3.9 Hydrology and Water Quality

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[5] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA 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 would 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 (RWQCBs) administer this permitting program in California. Section 402(p)

[5] A point source is any discrete conveyance such as a pipe or a man-made ditch.

requires permits for discharges of storm water 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 U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

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

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 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[6] 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 CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like 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 CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge

[6] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA 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 RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those 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 SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA 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 WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs 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 SWRCB 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, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined 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 storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department’s MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department’s MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

1. The Department must comply with the requirements of the Construction General Permit (see below);

2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water 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 the Department for implementing storm water 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 the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project would be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water 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 would 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.

Executive Order (EO) 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 (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 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

The project is in the Feather River and Middle Fork Feather River Hydrologic Unit and Area, respectively. The Middle Fork Feather River flows from east to west along the southern side of SR 70. The distance between the river, roadway and terrain vary throughout the project limits. Stormwater runoff from the project area may ultimately reach the river via the multiple tributary watercourses traversing the 20-mile long roadway segment. Named watercourses flowing through the project area include Jackson Creek, Bonta Creek, Betterton Creek, Willow Creek, and Humbug Creek. Other minor unnamed watercourses also flow through the project area. Stormwater runoff from the project site is conveyed by roadside ditches, inlets and culverts.

Environmental Consequences

Short-term impacts to receiving surface waters could include sediment discharges associated with grading, accidental heavy equipment fuels and lubricant leaks, spills or both, and pH changes from using concrete products and constructing structures.

During construction, installing clear water diversions to isolate work areas on flowing stream and/or dewatering would greatly reduce, if not prevent, direct discharges to water quality. Potential long-term impacts would be associated with inadequately stabilized areas disturbed by construction, impervious surface, and increased traffic volumes. In some cases, using RSP at

drainage inlets and outlets may be considered a permanent impact to the stream channel(s) but this would provide water quality benefits by preventing bank and bottom erosion.

Except for unforeseen accidental liquid chemical spills, where infiltration occurs unabated, no impacts to groundwater quality were identified. Isolated groundwater formation quantities could potentially be impacted if hydromodification impacts occur and result in channel bottom erosion. However, hydraulic analysis should determine whether increased flows would cause impacts. Adequate measures would be incorporated into the design to address any such impacts.

This project would increase the impervious surface footprint. However, added impervious surface would occur throughout the 20-mile long roadway segment. Drainage from the added impervious surfaces would flow toward various watercourses. Flow increases at each individual watercourse would be relatively small. Drainage work is planned for as many as 139 culverts. This includes replacing approximately 68 to 75 culverts, lining several culverts, and removing accumulated sediment and debris from others. All replaced culverts would be sized to meet current standards. End treatment would be provided at those culverts where the stream channel shows signs of erosion upstream from the inlets or downstream from the outlets.

There are no anticipated changes to aquatic environment characteristics resulting from this project. A Storm Water Pollution Prevention Plan (SWPPP) would be implemented prior to and during construction. The SWPPP would provide appropriate BMPs for effectively stabilizing DSA over both the short and long terms. To avoid potential temporary impacts and provide time and space for cleaning unplanned non-permitted discharges, most work would be conducted under dry conditions. If water is present in any drainage courses, then the work area would be isolated. Erosion control treatments would be applied to promote vegetation growth. Permanent revegetation would reduce potential long-term erosion and sediment transport-related impacts. Design pollution prevention BMPs usually include adding Flared End Sections (FES) at inlets and outlets for spreading flow and lowering its velocity and armoring selected inlet/outlets using Rock Slope Protection (RSP). It is anticipated similar BMPs would be incorporated into this project if deemed necessary.

This project would include new impervious surface in excess of one acre due to widening shoulders and replacing existing asphalt. Providing post-construction treatment BMPs would be a requirement. Potential treatment BMPs that are practical for this project would be evaluated during the design phase.

A Floodplain Evaluation Report Summary would be prepared during the project design phase to ensure the project would not change the floodplain of creeks and rivers in the project limits. It is anticipated that the proposed project is located within a mapped 100-year flood hazard area. However, the project would only minimally alter surface elevations within the mapped 100-year floodplain and would not result in a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).

CEQA Determination

The proposed project would have a less than significant impact on hydrology and water quality.

The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Specifically, the project would not

deplete groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

As described above, work would include dewatering the in-channel work area, potential installation of a temporary water diversion, and performing earthwork. There is a potential for limited erosion/siltation to occur during construction, which could temporarily degrade surface water quality. However, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river.

The project would increase impervious surfaces, however it would be treated in a manner that would not substantially increase the rate or amount of surface runoff such that it would result in flooding onsite/offsite; impede or redirect flows; create or contribute stormwater runoff which would exceed the capacity of existing or planned stormwater drainage systems; or provide substantial additional sources of polluted runoff. The proposed project would not risk release of pollutants due to inundation by flood, tsunami (California Department of Conservation 2020g), or seiche.

Avoidance, Minimization, and/or Mitigation Measures

The following BMPs from the Stormwater Quality Handbooks: *Caltrans Construction Site BMP Manual* (Caltrans 2017a) are anticipated to be incorporated into the approved project **SWPPP**:

1. Existing vegetation would be removed to the minimum extent necessary to facilitate the proposed work (SS-2).

2. Temporary drainage inlet protection methods, such as gravel bags, may be deployed to prevent sediment and other pollutants from entering drainage systems (SC-10).

3. Perimeter control devices, such as fiber rolls, compost socks, and silt fences, are available to reduce sediment transport from the project site (SC-6, SC-9). Straw mulch (SS-6), hydraulic mulch (SS-3), wood mulching (SS-8) and temporary covers (SS-7) are BMPs available for stabilizing DSA.

4. Spill prevention and control practices (WM-4).

Additional BMPs to address specific items of work would also likely be incorporated in the approved project SWPPP during the construction phase of the project.

It is anticipated the inclusion of appropriate temporary and permanent measures would avoid potential impacts to water quality and meet the requirements of the Caltrans NPDES Permit, CGP, and Central Valley Basin Plan. BMPs can be found in the Stormwater Quality Handbooks: *Construction Site Best Management Practices (BMPs) Manual (*Caltrans 2017a).

3.10 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 would 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 would focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see the Affected Environment, Environmental Consequences, and CEQA Conclusion sections 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). Table 7 lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Affected Environment

The majority of project is located in rural Plumas County with a small portion within the City of Portola. The project area includes scattered single-family residences, a motels, commercial retail and largely undeveloped areas.

Environmental Consequences

A Noise Study Report was not completed for this project. The project does not increase capacity, so a noise study report and Noise Abatement Decision Report were not required. Temporary noise impacts would occur during construction on the section of road that is being rehabilitated. Construction noise would be temporary and intermittent. Typical construction equipment (excavators, backhoes, dump trucks and graders) would be used to rebuild the roadway. This equipment produces noise that is similar to existing car and truck traffic. Due to the rural nature of the project area, the project would not result in substantial temporary or periodic increases in ambient noise levels and would not result in the exposure of persons to,

or generation of, excessive noise levels.

CEQA Determination

The project would have a less-than-significant impact related to noise.

The project would not result in permanent increases in noise levels above existing conditions. The project would not increase roadway capacity or involve the introduction of additional noise-producing facilities. The project area is open space and rural, with low-density single-family housing scattered throughout the project limits. The project would not expose people to noise levels in excess of established standards or result in a substantial permanent increase in ambient noise levels.

The project does not include features or facilities that would generate groundborne vibration or noise.

The project would not interfere with an airport land use plan, nor would it be affected by airport activities.

3.11 Public Services

Affected Environment

SR 70 within the project area is a public highway utilized by various public transportation service providers. Emergency service providers that operate within the project area include local police and fire departments, California Highway Patrol, and ambulances. These emergency service providers are vital to the safety of the local community and their effectiveness is often measured in the time required to respond to an emergency.

Environmental Consequences

The proposed project would extend the useful life of public roadways within the project area. Once built, the project would result in no adverse operational impacts on public services. During construction, travel time for various public transportation services may be slightly longer due to traffic controls. There would be no impacts to schools, parks and other public facilities as a result of the project. However, during construction, traffic would be limited to one-way traffic control in each direction through the section of road that is being worked on. Traffic control is typically limited to 15-20 minute delays and reduced speeds through the work area. Police, fire and first responders could potentially be delayed because of traffic control.

Avoidance/Minimization Measures

To minimize potential delays to response time for emergency services and travel time for public transportation services, public outreach efforts will be carried out prior to construction to ensure coordination occurs with local emergency services and law enforcement agencies.

CEQA Determination

The proposed project would have less than significant impacts to public services.

The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the 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 police and fire protection, schools, parks, or other public facilities.

3.12 Transportation/Traffic

Regulatory Setting

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

Affected Environment

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

Environmental Consequences

Vehicle traffic during construction would be controlled using the One-Way Reversing Traffic Control method. A pilot car would be utilized along with a sign holder at both ends of the work area and traffic would be able to proceed one direction at a time. Idling time for vehicles would be limited to the amount of time it takes for traffic from one direction to pass through the construction site. Non-motorized traffic would be escorted through the construction area, or a designated route would be identified.

CEQA Determination

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

The proposed project would not substantially conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; would not substantially increase hazards due to a geometric design feature or incompatible uses; would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), based on VMT traffic modeling; and would not result in inadequate emergency access.

Avoidance, Minimization, and/or Mitigation Measures

A Traffic Management Plan (TMP) would be prepared for the proposed project. The TMP would identify various traffic/transportation impacts that would occur during construction of the project. In addition, a TMP identifies measures to be implemented during construction to minimize traffic/transportation impacts. The following measures would be considered to minimize potential impacts on traffic, bicyclists, and pedestrians:

Public Outreach
Prior to construction, the following public outreach efforts shall be made:

- Inform the public about the proposed project.
- Notify adjacent homeowners, property owners, and businesses about the proposed project.
- Coordinate with the City, County, and local hospitals to ensure that emergency response personnel and public transportation personnel are aware of the proposed project.
- Coordinate with local school districts to ensure that the proposed project would have minimal disruption on transporting students to and from schools.
- Implement a public information campaign (e.g., news releases and worker safety media campaign).

3.13 Utilities and Service Systems

Affected Environment

Various utilities are present within the project area. These include overhead electrical lines mounted on utility poles, underground telephone cables, and underground fiber optic cables. In addition, solid waste collection service providers transit through the project area as part of solid waste collection. In the City of Portola, there are water and sewer lines in the project limits.

Environmental Consequences

Construction of the project would not disrupt solid waste collection services nor result in any planned loss of telephone services. Prior to construction activities, utility conflicts would be relocated so utilities could be provided without interruption.

During construction, the contractor would use water to construct fills and reduce construction related dust. The contractor would need to have the proper clearances or “will serve” letters prior to collecting and applying water.

CEQA Determination

The proposed project would have a less than significant impact on utilities and service systems.

The proposed project would use a municipal water supply location and would not need a wastewater treatment provider to service the project. The project would not generate solid waste exceeding state or local standards, or exceeding the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. As such, the proposed project would comply with federal, state, and local statutes and regulations related to solid waste.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are included for utilities and service systems.

3.14 *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 project area has both Local Responsibility Area and State Responsibility areas by the California State Department of Forestry and Fire Protection's Office of the State Fire Marshal Fire Assessment Mapping program (FRAP).

FRAP classifications in the project area include Very High Fire Severity zones. The majority of land outside the City limits of Portola is classified by FRAP as State Responsibility Area meaning the State of California through Cal Fire is responsible for providing fire protection. Other lands within California are Federally owned and not mapped by the FRAP program. Figures 6 and 7 below illustrate the Plumas County mapped Fire Severity Zones provided by the FRAP program.

Caltrans is one of two primary State Agencies tasked with the Essential Function of Transportation within the Plumas County Emergency Operations Plan. According to the Plan, the immediate use of transportation systems for emergency operational activities may exceed local capabilities thus requiring assistance from the Mutual Aid system. With multiple large wildfires in recent years such as the Camp Fire improved system resiliency is needed.

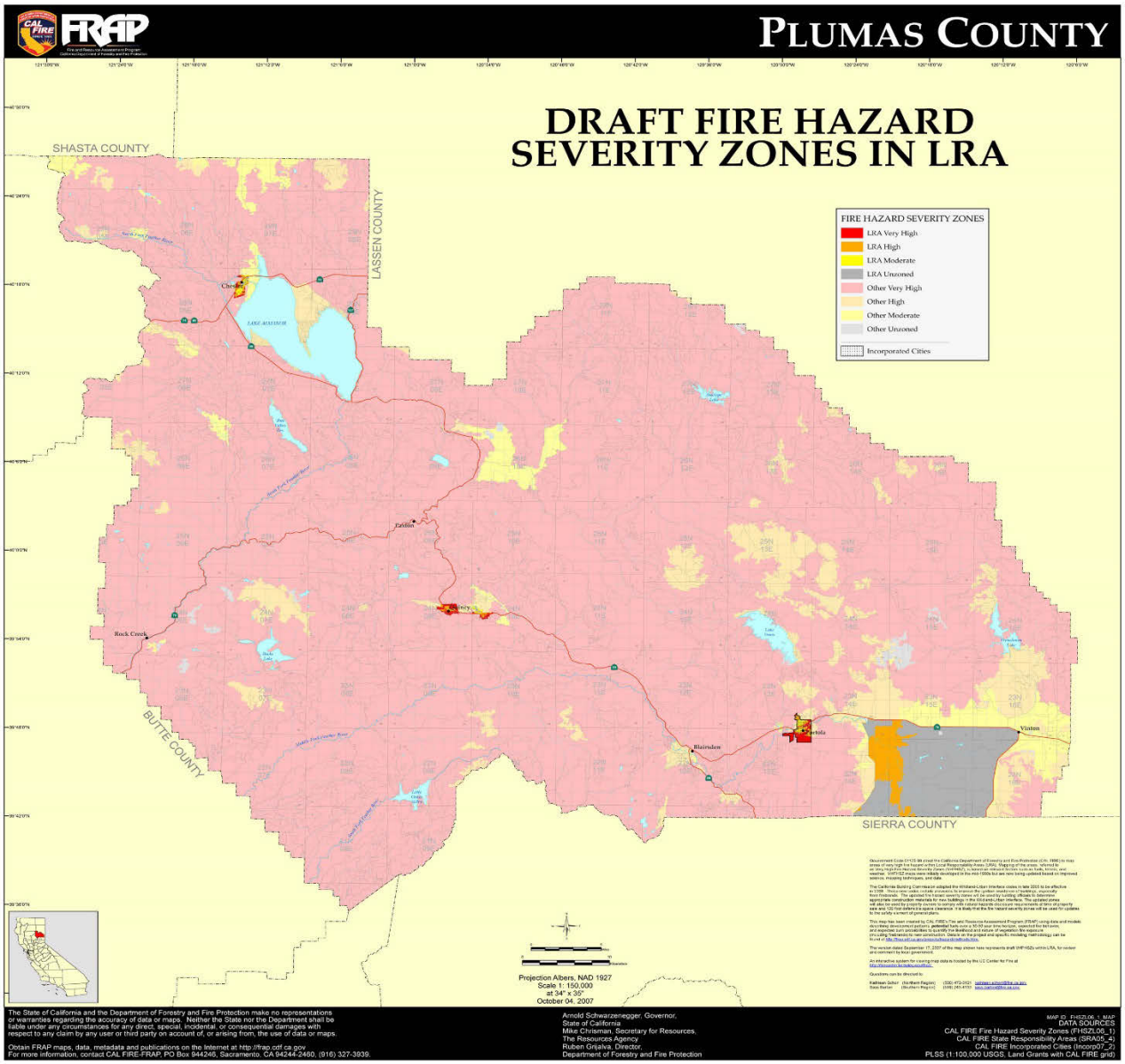

Figure 6. Fire hazard severity zones in Local Responsibility Area

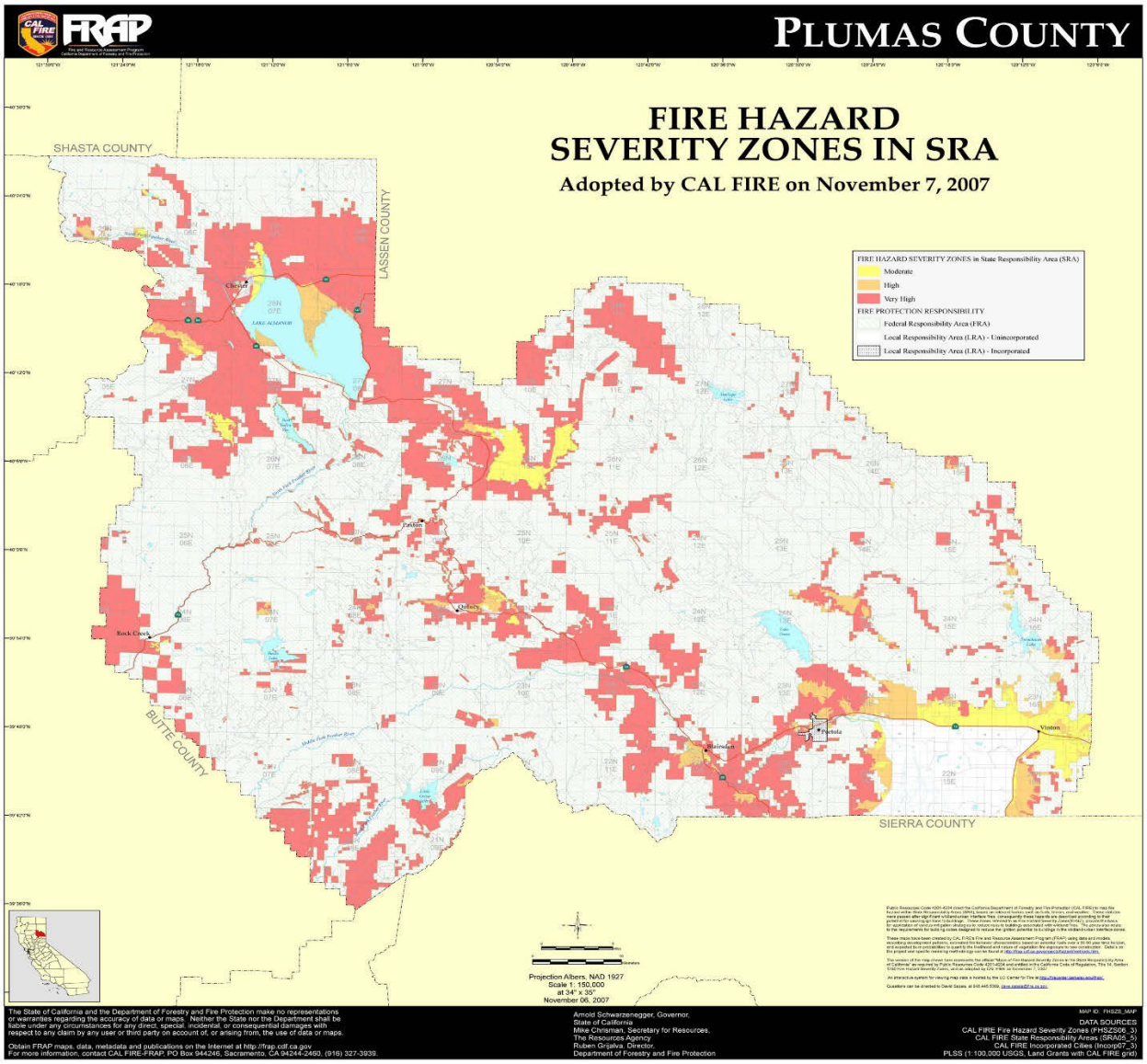

Figure 7. Fire hazard severity zones in State Responsibility Area

Environmental Consequences

The project would rehabilitate the existing highway and add 4- to 8- foot paved shoulders throughout the project limits. Currently, the facility within the project limits has 1 lane of traffic in each direction (east and west). During construction, 1-way controlled traffic would allow vehicles to pass through the construction area which would not impede emergency response or potential evacuations.

Coordination and outreach with the California Highway Patrol, local law enforcement and emergency response agencies would occur prior to, and during construction. The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

After construction is complete, the project would improve the ability of traffic to move through the area, which would improve the ability of the highway to serve the public during wildfire emergencies (emergency response times, congestion relief, evacuation plans and capacity, etc.).

The proposed project would improve existing transportation infrastructure by widening the lane width to current standards and adding paved shoulders on both sides of the road, in each direction.

The proposed project would not construct a new highway on a new alignment that would introduce the public to a different environment. The project does not include facilities for human occupation, shelter or storage such as housing, habitable structures or gathering areas.

The proposed project does not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, there would be no impact.

The proposed project is an infrastructure improvement project. Materials used to construct the project are non-combustible. All sources of electrical power would either be underground or contained in conduit and meet current electrical, building, and fire code, standards.

The proposed project does not require the installation or maintenance of additional associated infrastructure that may exacerbate fire risk or that may result in temporary ongoing impacts to the environment. Therefore, there would be no impact.

The proposed project does not include facilities for human occupation, shelter or storage such as housing, habitable structures or gathering areas. The project does not include facilities that would delay, hold, or limit movement of the traveling public such as, an intersection, tunnel, or a long bridge high off the ground, which could expose the public to increased risk in the event of a wildfire.

Therefore, the project as proposed does not 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. There would be no impact to people or structures.

Project Benefits

The project increases the width of the road which improves its function as a firebreak, reducing vegetation adjacent to the roadside, and provides additional paved areas for emergency response vehicle staging. If wildfire burned within the project limits, the project would reduce exposure to the public by increasing the distance between the travelling public and combustible material.

The project would improve travel time which can decrease emergency response time.

CEQA Determination

The project would have a less than significant impact to wildfire.

The project could have short term temporary impacts during construction, but once completed, the project would have beneficial impacts to wildfire associated issues.

Avoidance, Minimization, and/or Mitigation Measures

- It is Caltrans District 2 standard practice to require the contractor to produce an Emergency Evacuation Plan for projects located within elevated fire danger areas mapped by the Cal Fire FRA program. Standard Special Provision 12-4.02A(3)(c) would be included in contract specifications to require the contractor prepare an EEP.

Chapter 4. List of Preparers

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

André Benoist, Environmental Planner
Contribution: Initial Study writer

Christene Coffman, Biologist
Contribution: Natural Environment Study

Eric L. Rulison, Biologist
Contribution: Biological Assessment

David Demar, Archaeologist
Contribution: Cultural Resource Report

Carolyn Sullivan, Environmental Branch Chief
Contribution: Document oversight

Clint Burkenpas, Project Manager
Contribution: Project management

Javed Iqbal, Engineer
Contribution: Project Design

Toby Crawford, Engineer
Contribution: Design Senior

Joe Baltazar, Transportation Engineer
Contribution: Traffic Management Plan

Mark Melani, Hazardous Waste Specialist
Contribution: Initial Site Assessment Report

Yongil Cho, Transportation Engineer
Contribution: Air Quality/Greenhouse Gas Analysis and Energy Analysis Report

Chuck Lees, Hydraulic Engineer
Contribution: Location Hydraulic Study Report

Karl Harris, Hydraulic Engineer
Contribution: Stormwater/ Floodplain analysis

Miguel Villicana, NPDES Coordinator
Contribution: Water Quality Assessment Report

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