

# **Lemon Canyon Road Culvert Upgrade Project**

State Route 49 in Sierra County

03-Sie-49-PM 48.3/49.2

EA 03-4E540 / EFIS 0300000709

## **Initial Study with Proposed Mitigated Negative Declaration**



Prepared by the  
State of California Department of Transportation

November 2011



## **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 alternatives being considered for the proposed project located in Sierra County, California. The document describes the proposed project, the existing environment that could be affected by the project, potential impacts from the project, and the proposed avoidance, minimization, and/or mitigation measures.

### ***What should you do?***

Please read this Initial Study. Additional copies of this document as well as the technical studies are available for review at the Caltrans District 3 Office of Environmental Management, 703 B Street, Marysville, CA 95901 and the Plumas County Library, 445 Jackson Street, Quincy, CA 95971; the Loyalton Library, 511 Main Street, Loyalton, CA 96118; and the Portola Library, 34 Third Street, Portola, CA 96122

- We welcome your comments. If you have any concerns regarding the proposed project, please send your written comments to Caltrans by December 14, 2011. Submit comments via U.S. mail to Caltrans at the following address:

Sandra Rosas, Senior Environmental Planner  
Environmental Management Branch M-2  
California Department of Transportation  
703 B Street

Marysville, CA 95901

- Submit comments via email to: [sandra\\_rosas@dot.ca.gov](mailto:sandra_rosas@dot.ca.gov).
- Submit comments by the deadline: December 14, 2011.

### ***What happens next?***

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

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: *Sandra Rosas, Senior Environmental Planner, 703 B Street, Marysville, CA 95901; (530) 741-4017* Voice, or use the California Relay Service TTY number, 1-800-735-2929.

Lemon Canyon Road Culvert Upgrade Project  
State Route 49 in Sierra County  
03-Sie-49-PM 48.3/49.2  
EA 03-4E540 / EFIS 0300000709

**Initial Study with Proposed Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA  
Department of Transportation

4 November 2011  
Date of Approval

  
\_\_\_\_\_  
John Webb, Chief  
North Region Environmental Services  
California Department of Transportation

# PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

SCH No. \_\_\_\_\_

State of California  
Department of Transportation

03-SIE -49-PM 48.3/49.2  
EA 03-4E540 / EFIS 0300000709

## ***Project Description***

The California Department of Transportation (Caltrans) proposes to remove and replace twelve corrugated metal pipe culverts with larger culverts along State Route 49, between Sierraville and Loyalton (postmiles 48.3 to 49.2), in Sierra County. Additional work would include constructing water diversion systems for dewatering and culvert replacement work, realigning longitudinal ditches to meet the ends of the new culverts, and installing rock energy dissipaters at some or all culvert ends.

## ***Determination***

An Initial Study has been prepared by Caltrans. On the basis of this study it is determined that the proposed action, with the incorporation of the identified avoidance and minimization measures, will not have a significant effect on the environment for the following reasons:

- The proposed project will have minimal or no effect on aesthetics, agriculture/forest resources, air quality, cultural resources, geology/soils, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation/traffic, and utilities/service systems.
- Wetland impacts will be mitigated to result in a no net loss of wetlands.
- Potential impacts to Plumas ivesia (*Ivesia sericoleuca*) and Sierra Valley evening-primrose (*Camissonia tanacetifolia* ssp. *quadriperforata*) will be avoided by designating them as environmentally sensitive areas.
- Potential impacts to Sierra Nevada yellow-legged frog (*Rana sierrae*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), greater sandhill crane (*Grus canadensis tabida*), and migratory birds will be avoided or minimized through the implementation of avoidance and minimization measures.

---

John Webb, Chief  
North Region Environmental Services  
California Department of Transportation

---

Date

## **Initial Study**

### **Project Title**

Lemon Canyon Road Culvert Upgrade Project

### **Lead Agency Name and Address**

California Department of Transportation

### **Contact Person and Phone Number**

Sandra Rosas, Senior Environmental Planner  
(530) 741-4017

### **Project Location**

The proposed project site is located on State Route (SR) 49, from postmile (PM) 48.3 to PM 49.2, between Sierraville and Loyalton, in Sierra County. Refer to the Project Location Map and the Project Vicinity Map on pages 3 and 4.

### **Project Sponsor's Name and Address**

California Department of Transportation  
Sandra Rosas, Senior Environmental Planner  
703 B Street  
Marysville, CA 95901

### **Zoning**

The proposed project is zoned as agricultural.

### **Surrounding Land Uses and Setting**

Land uses within the project vicinity are cattle grazing and low-density residential ranches. The project is compatible with the Sierra County General Plan. No alteration to present or planned land use would occur as a result of the proposed project.

The project is consistent with the following applicable goal and policy of the Sierra County General Plan:

Goal 1: "It is the goal of the County to provide a comprehensive, efficient, safe, and safe transportation system within the existing roadway network."

Policy 15: "Provide improvements to existing roads when needed to ensure safety."

## **Description of Project**

The California Department of Transportation (Caltrans) proposes to remove and replace twelve corrugated metal pipe culverts with larger culverts along SR 49 in Sierra County. The scope of work involves removing the existing pipe culvert drainage systems, placing new culvert drainage systems with or without flared end sections (five single 48-inch plastic pipe culverts and five double 48-inch plastic pipe culverts), grinding out and repairing failed pavement areas, overlaying the highway with new asphalt concrete (AC), placing shoulder backing (out to 3 feet, over the existing shoulder backing), grinding AC pavement at the south and north conforms, and installing permanent signing and striping. The culverts would be embedded 6 inches where feasible so that sediment will create a natural bottom.

Additional work would include constructing water diversion systems for dewatering and culvert replacement work, realigning longitudinal ditches to meet the ends of the new culverts, and installing rock energy dissipaters at some or all culvert ends.

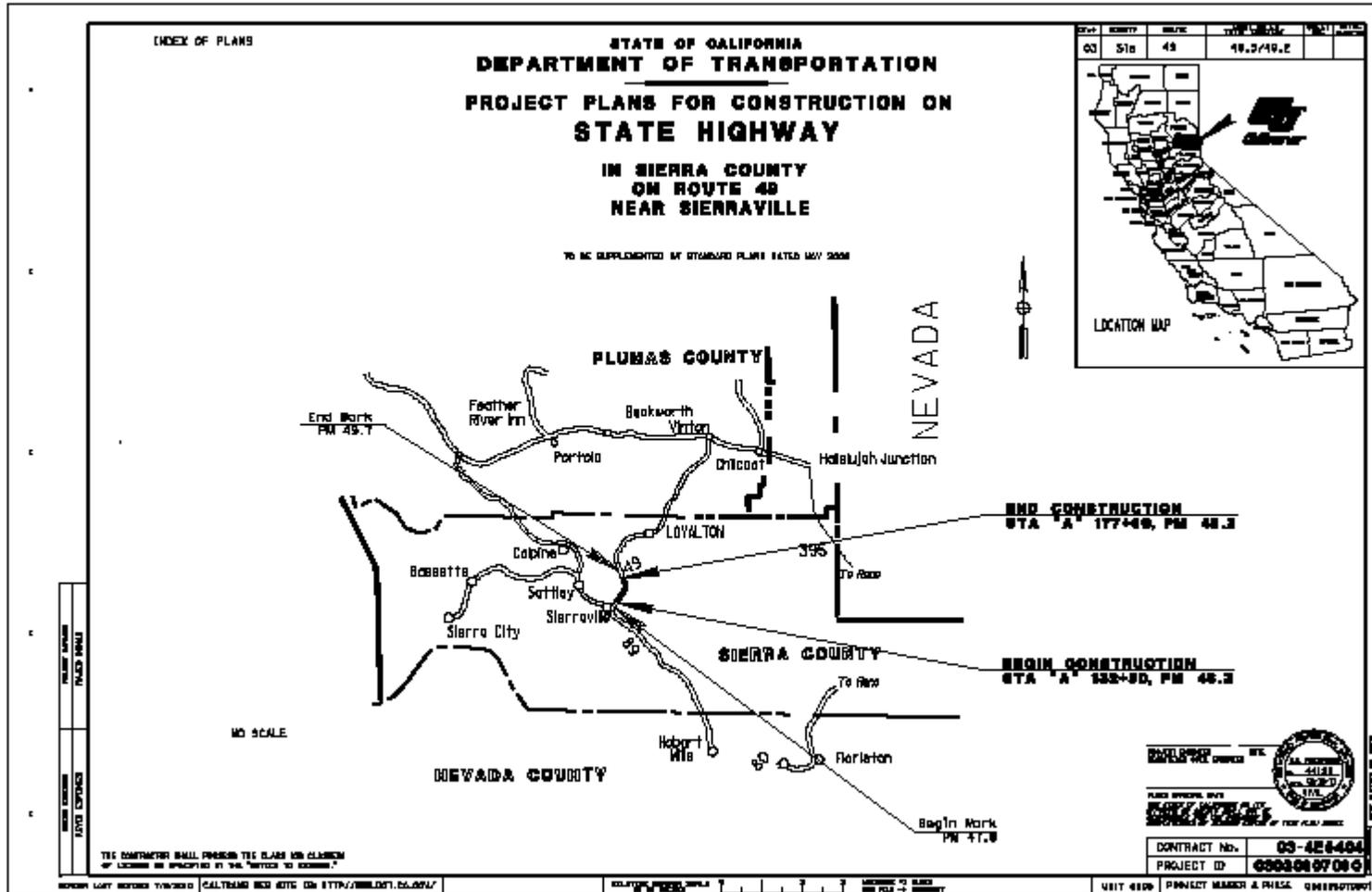
All construction would be performed within the Caltrans' right-of-way and no construction easements would be required.

## **Permits and Approvals Needed**

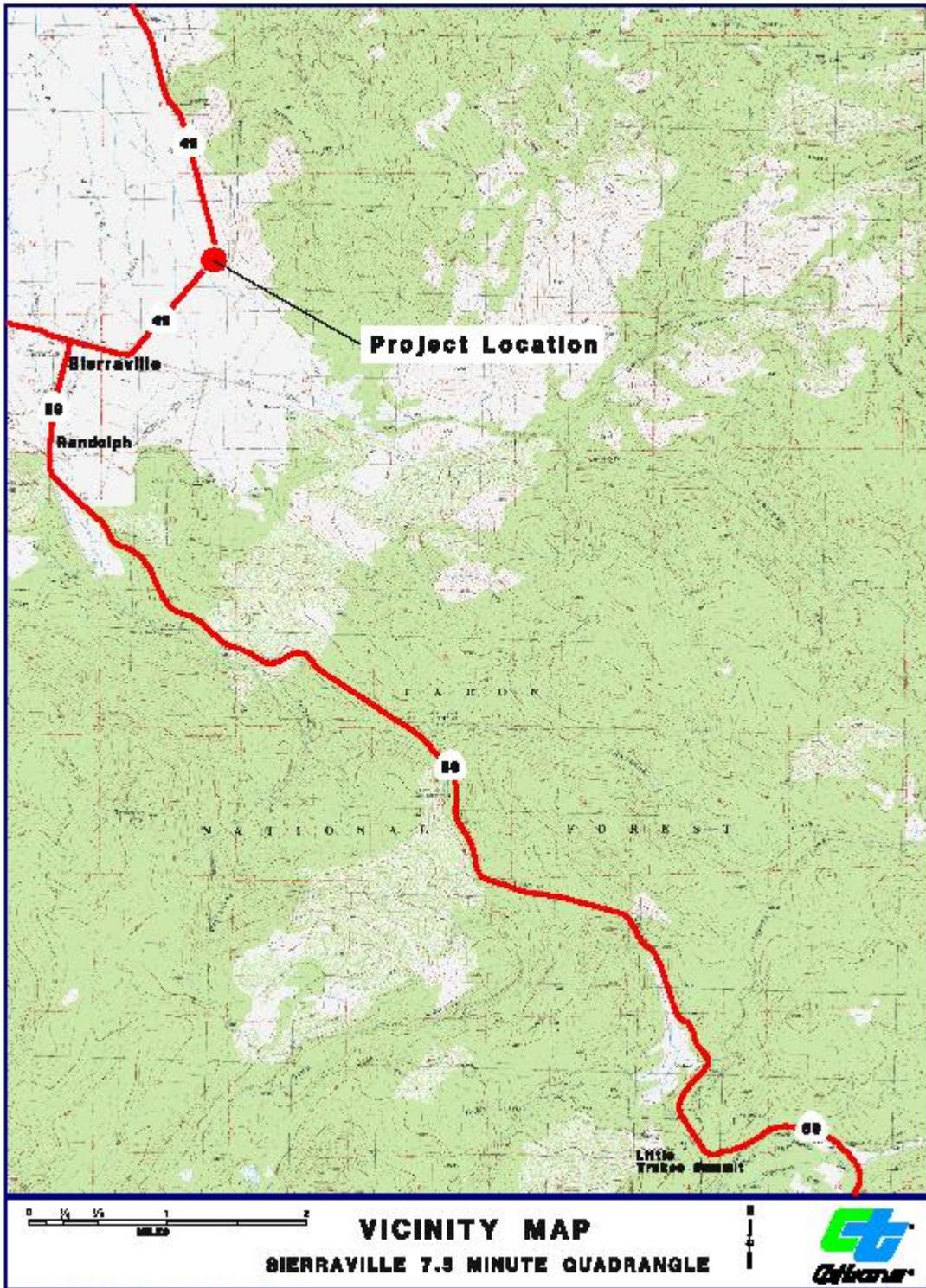
The following environmental permits and approvals are required for this project:

- U. S. Army Corps of Engineers, Section 404 Permit.
- Central Valley Regional Water Quality Control Board, Section 401 Water Quality Certification.
- California Department of Fish and Game, Section 1602 Streambed Alteration Agreement.

# Project Location Map



# Project Vicinity Map



# **Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures**

---

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding aesthetics, agriculture/forest resources, air quality, cultural resources, geology/soils, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation/traffic, and utilities/service systems.

## **Biological Resources**

### **WETLANDS AND OTHER WATERS**

#### **Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act [CWA(33 USC 1344)] is the primary law regulating wetlands and surface waters. The CWA regulates the discharge of dredged or fill material into waters of the United States (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. 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 of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U. S. EPA).

USACE issues two types of 404 permits: Standard and General permits. Nationwide permits, a type of General permit, are issued to authorize a variety of minor project activities with no more than minimal effects. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U. S. EPA's Section 404(b)(1) Guidelines (U. S. EPA 40 CFR Part 230), and whether permit approval is in the public interest. The Section

404 (b)(1) Guidelines were developed by the U. S. EPA in conjunction with 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 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 (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration (FHWA) and/or Caltrans, 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.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game (CDFG), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. The CDFG 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 CDFG. The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the CWA.

### ***Affected Environment***

The wetland delineation for this project was conducted using the routine onsite determination method described in the 1987 *U. S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), as well as the supplemental procedures and wetland indicators provided in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (U. S. Army Corps of Engineers 2010). Data for wetlands and other waters were collected to support a preliminary jurisdictional determination pursuant to Public Notice SPK-2008-01557.

The boundaries of nonwetland waters in the delineation area were identified by locating the ordinary high water mark (OHWM), which represents the lateral limit of USACE jurisdiction over nontidal, nonwetland waters in the absence of adjacent wetlands (33 Code of Federal Regulations [CFR] 328.4[c]). The OHWM was identified using the field indicators provided in 33 CFR 328.3(e) and 329.11(a)(1) and in guidance issued by USACE in 2005 (U. S. Army Corps of Engineers 2005). The *Preliminary Delineation of Wetlands and Other Waters of the U. S.* (August 2011) prepared for this project will be submitted to USACE for verification.

Various wetland and other waters of the U. S. types are present within the environmental study limits (ESL). Table 1 summarizes the potential wetlands and other waters of the U. S. present within the ESL.

**Table 1. Total Area of Wetland and Other Waters of the U. S. Types within the ESL**

<b>Wetland/Other Waters of the U. S. Type</b>	<b>Total Area (acres)</b>
Freshwater Emergent Marsh	2.712
Seasonal Wetland	0.187
Wet Meadow	1.139
Willow Scrub	0.164
Perennial Stream	0.128
Intermittent Stream	0.077
Ephemeral Stream	0.004
<b>Total</b>	<b>4.441</b>

A total of 4.411 acres of wetlands and other waters of the U. S. were identified in the delineation area. All features were determined to potentially be within USACE jurisdiction under the Clean Water Act Section 404.

### ***Environmental Consequences***

The proposed project would permanently impact a total of 0.077 acres of waters of the U. S. potentially under the jurisdiction of the USACE, 0.065 acres of which are wetlands. The proposed project would temporarily impact a total of 0.495 acres of waters of the U. S. potentially under the jurisdiction of USACE, 0.444 acres of which are wetlands. Final waters of the U. S. impact totals would be calculated after the wetland and other waters of the U. S. delineation is verified by USACE. Tables 2 and 3 summarize the permanent and temporary impacts to wetlands and other waters of the U. S.

**Table 2. Permanent and Temporary Impacts to Wetlands**

<b>Wetland Type</b>	<b>Permanent Impacts (acres)</b>	<b>Temporary Impacts (acres)</b>
Freshwater Emergent Marsh	0.054	0.307
Seasonal Wetland	0	0.009
Wet Meadow	0.006	0.114
Willow Scrub	0.005	0.014
<b>Total</b>	<b>0.065</b>	<b>0.444</b>

**Table 3. Permanent and Temporary Impacts to Other Waters of the U. S.**

<b>Other Water Type</b>	<b>Permanent Impacts (acres)</b>	<b>Temporary Impacts (acres)</b>
Perennial Stream	0.006	0.035
Intermittent Stream	0.006	0.016
<b>Total</b>	<b>0.012</b>	<b>0.051</b>

***Avoidance, Minimization, and/or Mitigation Measures***

Wetlands and other waters of the U. S. located adjacent to the work areas would be protected during construction by clearly identifying the resources as environmentally sensitive areas (ESAs) and installing construction barrier fencing (including sediment fencing, where appropriate). Before construction, a qualified biologist would identify the locations of the barrier fencing and would mark those locations with stakes or flagging. The barrier fencing would be in place before construction activities are initiated. The fencing would be maintained throughout the duration of the construction period. If the fencing is removed, damaged, or otherwise compromised during the construction period, construction activities would cease until the fencing is replaced.

Impacts to wetlands and other waters of the U. S. would be mitigated through the restoration and/or enhancement of the project area. Areas disturbed for access and construction would be stabilized and revegetated at the completion of construction in order to minimize erosion and restore functions and values of the habitat.

## PLANT SPECIES

### **Regulatory Setting**

The U. S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) 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 afforded 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 below in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG 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 United States Code 16 (USC), Section 1531, et seq. See also 50 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), Public Resources Code, Sections 2100-21177.

A total of 26 plant species of concern were identified as potentially occurring in the project area. Two sensitive plant species, Plumas ivesia and Sierra Valley evening-primrose, were observed in the study area.

### **Plumas Ivesia**

#### **Affected Environment**

Plumas ivesia (*Ivesia sericoleuca*) is listed by the California Native Plant Society (CNPS) as a List 1B.2 species. Plants on List 1B are fairly threatened or endangered in California and elsewhere. The “.2” corresponds to a threat rank determined by CNPS denoting that the species is fairly threatened in California. Suitable habitat for Plumas ivesia consists of rocky, upland pasture areas, which occur outside the right of way in the majority of the study area. A California Natural Diversity Database (CNDDB) occurrence of Plumas ivesia is located approximately 0.7 to 1.0 miles northeast of Sierraville on both sides of SR 49. This occurrence was last seen in June 2000. At the time of the 2010 and 2011 botanical surveys, no Plumas

ivesia plants were observed in the portion of the mapped CNDDDB occurrence located within the right of way, which instead consisted of wetland areas (freshwater marsh, wet meadow) and ruderal grassland adjacent to SR 49 that did not contain suitable habitat for the species. Occurrences of *Plumas ivesia* observed during the 2010 botanical surveys consisted of approximately five individuals located adjacent to the fenceline at the north end of the study area (near PM 49.40) on the west side of SR 49.

### ***Environmental Consequences***

The proposed project would not directly affect the *Plumas ivesia* observed within the ESL. Avoidance and minimization measures would protect the *Plumas ivesia* from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The *Plumas ivesia* plants would be designated as ESAs and would be protected during construction of the proposed project.

## **Sierra Valley Evening-Primrose**

### ***Affected Environment***

Sierra Valley evening-primrose (*Camissonia tanacetifolia* ssp. *quadriperforata*) is listed by the CNPS as a List 4.3 species. List 4 species are plants of limited distribution or infrequent occurrence throughout California, and their vulnerability or susceptibility to threat appears relatively low at this time. Plants on List 4 cannot be called "rare" from a statewide perspective, yet they are uncommon enough that their status is monitored regularly when possible. The “.3” corresponds to a threat rank determined by CNPS denoting that the species is not very endangered in California. Approximately ten Sierra Valley evening-primrose plants were observed in the northern portion of the study area (between PM 49.20 and 49.40) in the grassland on the road shoulders and embankment adjacent to both sides of SR 49.

### ***Environmental Consequences***

The proposed project would not directly affect the Sierra Valley evening-primrose observed within the ESL. Avoidance and minimization measures would protect the Sierra Valley evening-primrose from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The Sierra Valley evening-primrose plants would be designated as ESAs and would be protected during construction of the proposed project.

## THREATENED AND ENDANGERED SPECIES

### ***Regulatory Setting***

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent 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), 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 Service) 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 is a Biological Opinion or an Incidental Take statement. 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 Game (CDFG) is the agency responsible for implementing CESA. Section 2081 of the 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 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 CDFG. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFG 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.

## **Sierra Nevada Yellow-Legged Frog**

### ***Affected Environment***

The Sierra Nevada yellow-legged frog (*Rana sierrae*) is listed as a state candidate species and a federal candidate species. The ESL was assessed for habitat for the Sierra Nevada yellow-legged frog during a site visit in September 2010. The drainage ditches within the ESL and streams that cross SR 49 provide marginal habitat for this species because these aquatic features do not provide typical breeding and tadpole rearing habitat. The aquatic features in the study area lack the typical substrate the Sierra Nevada yellow-legged frog uses for egg attachment (gravel or rocks in shallow water) and also lack typical foraging habitat for tadpoles (rocky bottoms in shallow water streams, lakes, and ponds). In addition, the banks of the drainage ditches and stream channels within the SR 49 right-of-way are heavily vegetated and lack the typical basking habitat used by this species (open stream banks and lake edges). The large population of bullfrogs observed within the study area, which could prey on and compete with the Sierra Nevada yellow-legged frog, and the presence of fish further reduces the likelihood that Sierra Nevada yellow-legged frogs breed within or adjacent to the study area. The nearest record in the CNDDDB is approximately 8 miles south of the project site and was recorded in 2008 (CNDDDB 2011).

### ***Environmental Consequences***

Avoidance and minimization measures would protect the Sierra Nevada yellow-legged frog from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following measures would be incorporated into the project in order to protect the Sierra Nevada yellow-legged frog and its habitat during construction:

1. A survey for Sierra Nevada yellow-legged frogs would be conducted prior to the start of construction.
2. Silt fencing or other fine-mesh plastic fencing would be installed, as feasible, to exclude Sierra Nevada yellow-legged frogs from entering the work areas.
3. Screens (1/8 inch mesh or finer) would be placed over dewatering pump intakes to avoid uptake of Sierra Nevada yellow-legged frogs eggs and tadpoles.

4. A biological monitor would be on-site to ensure that no Sierra Nevada yellow-legged frogs, or other aquatic species, are stranded or trapped within work areas during dewatering.

## **Burrowing Owl**

### ***Affected Environment***

The burrowing owl (*Athene cunicularia*) is listed as a state species of special concern. During the reconnaissance-level wildlife survey, it was determined the project area and adjacent areas represent suitable foraging habitat for the burrowing owl during summer months. No ground squirrel burrows were observed within or in areas immediately adjacent to the study area that could be used for burrowing owl nesting. It is presumed that due to seasonal flooding and saturated soil conditions into the summer that these areas are not suitable for ground squirrels and thus burrowing owls. Drier upland areas further beyond the project area may support habitat for burrowing owls. The nearest CNDDDB record is approximately 40 miles north of the study area; however the online eBird database has a reported sighting approximately 1.5 miles west of the study area (CNDDDB 2011; eBird 2011).

### ***Environmental Consequences***

Avoidance and minimization measures would protect the burrowing owl from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following measures would be incorporated into the project in order to protect the burrowing owl during construction:

1. A survey for burrowing owls would be conducted prior to the start of construction.
2. If project activities would affect occupied burrowing owl burrows during August through February, the owls would be passively relocated from burrows using one-way doors. One-way doors would be in place for a minimum of 48 hours before burrows are excavated.
3. If project activities would affect occupied burrows or disrupt reproductive behavior during the nesting season (March through July), construction would be delayed within 300 feet of occupied burrows until it is determined that the owls are not nesting or that

juvenile owls are self-sufficient or are no longer using the burrow as their primary source of shelter.

## **Swainson's Hawk**

### ***Affected Environment***

The Swainson's hawk (*Buteo swainsoni*) is listed as state threatened species. During the reconnaissance-level wildlife survey, it was determined the project area and areas adjacent represent potential foraging habitat for Swainson's hawk. The foraging habitat within the project area is limited to narrow strips of grassland, seasonal wetland, and wet meadow. Foraging in these areas could be hindered by the presence of the nearby road, the steep topography within the right-of-way that is associated with roadside drainage ditches, and the adjacent fence, all of which would make prey capture difficult. Because of the aforementioned reasons, the Swainson's hawk foraging habitat in the study area is considered to be of marginal quality.

The study area does not support suitable nesting habitat for Swainson's hawk because there are no trees large enough to support nesting. There are trees within 0.5 miles of the study area that could potentially be used for Swainson's hawk nesting. The nearest reported nesting occurrence is from 2008 and is just over 10 miles north of the study area in Sierra Valley (CNDDDB 2011). There are reported observations of Swainson's hawks approximately 1 mile west of the study area (eBird 2011).

### ***Environmental Consequences***

Avoidance and minimization measures would protect the Swainson's hawk from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following measures would be incorporated into the project in order to protect the Swainson's hawk during construction:

1. A survey for active Swainson's hawk nests would be conducted prior to the start of construction.
2. If an active Swainson's hawk nest is found, no intensive new disturbances (such as heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project-related activities that may cause nest abandonment or forced fledging would be initiated within 600 feet (buffer zone) of the nest between March 1 and September 15. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active.

## **Greater Sandhill Crane**

### ***Affected Environment***

The greater sandhill crane (*Grus canadensis tabida*) is listed as a state threatened species. During the reconnaissance-level wildlife survey, it was determined the project area does not contain suitable roosting, foraging, or nesting habitat for greater sandhill cranes. This determination was based on the small size of the onsite wetlands, the steep topography of the roadside drainage ditches, and the presence of the right-of-way fence. Greater sandhill cranes prefer more open habitats away from human disturbance where they can roost, forage, and nest in small to large colonies.

The areas of wet meadow and emergent marsh in the vicinity of the project area would represent more suitable habitat for sandhill cranes. The nearest reported nesting occurrence is approximately 1.5 mile south of the study area, with several other nesting occurrences more than 2 miles north of the study area (CNDDDB 2011). Greater sandhill cranes have been observed on multiple occasions within 1 mile of the study area (eBird 2011).

### ***Environmental Consequences***

Avoidance and minimization measures would protect the greater sandhill crane from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following measures would be incorporated into the project in order to protect the greater sandhill crane during construction:

1. A survey for nesting greater sandhill cranes would be conducted prior to the start of construction.
2. If an active greater sandhill crane nest is found, a no-disturbance buffer would be established around the site to avoid disturbance or destruction of the nest site until the young have fledged and moved out of the project area.

## **Migratory Birds**

### ***Affected Environment***

The project area represents potential foraging and nesting habitat for migratory birds, including short-eared owl, northern harrier, and loggerhead shrike. Foraging habitat for larger raptors could be hindered by the presence of the nearby road, the steep topography within the right-of-

way that is associated with roadside drainage ditches, and the adjacent fence, all of which would could make prey capture difficult.

All areas of the study area, except for the developed roadway, could be used as nesting habitat. During the reconnaissance level wildlife survey, old red-winged blackbird nests were observed in areas of emergent marsh within the study area. The areas adjacent to the study area also represent suitable nesting habitat for migratory birds. There are no reported nesting occurrences for short-eared owl, northern harrier, and loggerhead shrike in the CNDDDB (CNDDDB 2011). Short-eared owl, northern harrier, and loggerhead shrike have been observed in Sierra Valley (eBird 2011).

### ***Environmental Consequences***

Avoidance and minimization measures would protect nesting migratory birds from impacts during construction of the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following measures would be incorporated into the project in order to protect the migratory birds during construction:

1. A survey for nesting migratory birds would be conducted prior to the start of construction.
2. If active nests are found in the survey area, a no-disturbance buffer would be established around the site to avoid disturbance or destruction of the nest site until the young have fledged and moved out of the project area.

## **INVASIVE SPECIES**

### ***Regulatory Setting***

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States (U. S.). 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 guidance issued August 10, 1999 directs the use of the State’s invasive species list currently maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

## Affected Environment

Table 4 identifies invasive plant species identified by California Department of Food and Agriculture and California Invasive Plant Council that were observed within the ESL. Most of these species occur along the edge of SR 49 and on the slope below SR 49.

Table 4 Invasive Plant Species Observed in the Study Area

Species	CDFA	Cal-IPC
soft chess ( <i>Bromus hordeaceus</i> [ <i>B. mollis</i> ])	–	Limited
cheatgrass ( <i>Bromus tectorum</i> )	–	High
Canada thistle ( <i>Cirsium arvense</i> )	B	Moderate
bull thistle ( <i>Cirsium vulgare</i> )	C	Moderate
poison hemlock ( <i>Conium maculatum</i> )	–	Moderate
field bindweed ( <i>Convolvulus arvensis</i> )	C	–
redstem filaree ( <i>Erodium cicutarium</i> )	–	Limited
common velvet grass ( <i>Holcus lanatus</i> )	–	Moderate
foxtail barley ( <i>Hordeum murinum</i> ssp. <i>leporinum</i> )	–	Moderate
Klamath weed ( <i>Hypericum perforatum</i> )	C	Moderate
Italian ryegrass ( <i>Lolium multiflorum</i> )	–	Moderate
hyssop loosestrife ( <i>Lythrum hyssopifolium</i> )	–	Limited
English plantain ( <i>Plantago lanceolata</i> )	–	Limited
Kentucky bluegrass ( <i>Poa pratensis</i> )	–	Limited
sheep sorrel ( <i>Rumex acetosella</i> )	–	Moderate
curly dock ( <i>Rumex crispus</i> )	–	Limited
medusa-head ( <i>Taeniatherum caput-medusae</i> )	C	High
woolly mullein ( <i>Verbascum thapsus</i> )	–	Limited

*Notes:* The CDFA and Cal-IPC lists assign ratings that reflect the CDFA and Cal-IPC views of the statewide importance of the pest, likelihood that eradication or control efforts would be successful, and present distribution of the pest in the state. These ratings are guidelines that indicate the most appropriate action to take against a pest under general circumstances.

The CDFA categories indicated in the table are defined as follows:

**B:** Eradication, containment, control, or other holding action at the discretion of the agricultural commissioner.

**C:** State-endorsed holding action and eradication only when found in a nursery; action to retard spread outside nurseries at the discretion of the agricultural commissioner.

The Cal-IPC categories indicated in the table are defined as follows:

**High:** Species that have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. These species have moderate to high rates of dispersal and establishment based on their reproductive biology and other characteristics and have a wide ecological distribution.

**Moderate:** Species with substantial and apparent ecological impacts, moderate to high rates of dispersal, and limited to widespread distribution; establishment dependent on disturbance.

**Limited:** Species with minor ecological impacts, low to moderate rates of invasion, and limited distribution; locally persistent and problematic.

## Environmental Consequences

Implementation of avoidance and minimization measures would prevent the introduction and spread of invasive plant species.

## Avoidance, Minimization, and/or Mitigation Measures

The following measures would be incorporated into the project in order to prevent the introduction and spread of invasive plant species:

1. Educate construction supervisors and managers on the importance of controlling and preventing the spread of invasive weeds.
2. Wash construction vehicles and equipment offsite before arriving at the construction site. If vehicles or equipment leave the construction site prior to the end of the proposed project's construction period, they would be washed prior to re-entry.
3. Minimize surface disturbance to the greatest extent feasible to complete the work.
4. Use erosion control materials (e.g., straw wattles) that are weed-free or contain less than 1% weed seed.

## CLIMATE CHANGE (CEQA)

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 gases (GHGs), 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's in 1988, has led to increased efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs related to human activity that include carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

There are typically two terms used when discussing the impacts of climate change.

"Greenhouse Gas (GHG) Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts due to climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)<sup>1</sup>.

Transportation sources (passenger cars, light duty trucks, other trucks, buses and motorcycles) in the state of California make up the largest source (second to electricity generation) of greenhouse gas emitting sources. Conversely, the main source of GHG emissions in the United States (U. S.) is electricity generation followed by transportation. The dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion.

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

---

<sup>1</sup> [http://climatechange.transportation.org/ghg\\_mitigation/](http://climatechange.transportation.org/ghg_mitigation/)

## ***Regulatory Setting State***

With the passage of several pieces of legislation including State Senate and Assembly Bills and Executive Orders, California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases (AB 1493), 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U. S. Environmental Protection Agency (U. S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with Federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order S-3-05: (signed on June 1, 2005, by Governor Arnold Schwarzenegger) the goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB32 (AB 32), the Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the State's Climate Action Team.

Executive Order S-01-07: Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by 2020.

Senate Bill 97 (Chapter 185, 2007): required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. The Amendments became effective on March 18, 2010.

## **Federal**

Although climate change and GHG reduction is a concern at the federal level; currently there are, no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U. S. EPA) nor Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and Executive Order 13514- *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the interagency Climate Change Adaptation Task Force, which is engaged in developing a U. S. strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U. S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U. S. EPA has the authority to regulate GHG. The Court held that the U. S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U. S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U. S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009<sup>2</sup>. On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

U. S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a memorandum on May 21, 2010.<sup>3</sup>

The final combined U. S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon (MPG) if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

---

<sup>2</sup> <http://www.epa.gov/climatechange/endangerment.html>

<sup>3</sup> <http://epa.gov/otaq/climate/regulations.htm>

On January 24, 2011, the U. S. EPA along with the U. S. Department of Transportation and the State of California announced a single timeframe for proposing fuel economy and greenhouse gas standards for model years 2017-2025 cars and light-trucks. Proposing the new standards in the same timeframe (September 1, 2011) signals continued collaboration that could lead to an extension of the current National Clean Car Program.

### **Project Analysis**

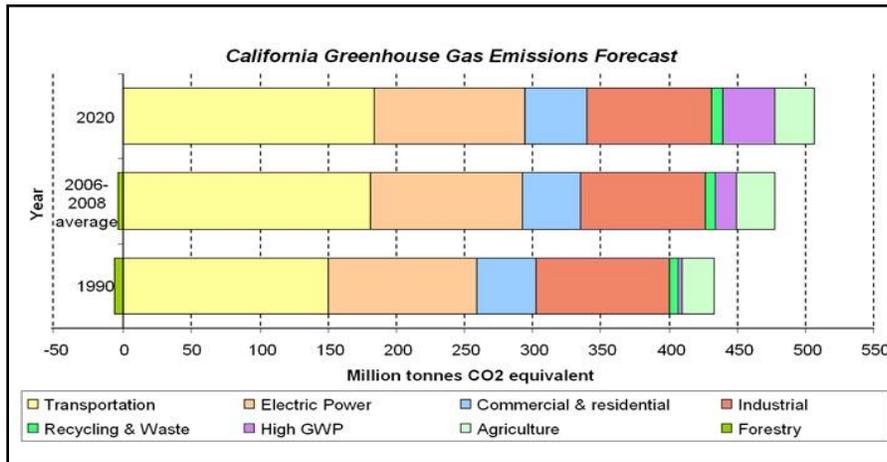
An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG.<sup>4</sup> In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See California Environmental Quality Act (CEQA) Guidelines sections 15064(h)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

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

---

<sup>4</sup> This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the SCAQMD ( Chapter 6: : The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

## CALIFORNIA GREENHOUSE GAS FORECAST



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

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, the Department has created and is implementing the Climate Action Program at Caltrans that was published in December 2006 (see Climate Action Program at Caltrans (December 2006)).<sup>5</sup>

The proposed culvert replacement project will improve water quality by rehabilitating culverts on State Route 49 in Sierra County. The scope of work includes grinding out and repairing failed pavement areas, overlaying the highway with new Asphalt Concrete (AC), placing shoulder backing, pavement taper grinding at the beginning and ending of the project, and installing permanent signing and striping. There will be no change to the existing lane configuration or capacity of the highway. Since the project will not increase capacity or vehicle hours travelled, no increases in operational GHG emissions are anticipated. While emissions of GHGs during construction are unavoidable, there will likely be long term benefits through improved safety, improved traffic operations, elimination of current maintenance operations, and smoother pavement surface following completion of the project.

### Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include

<sup>5</sup> Caltrans Climate Action Program is located at the following web address: [http://www.dot.ca.gov/hq/tpp/offices/ogm/key\\_reports\\_files/State\\_Wide\\_Strategy/Caltrans\\_Climate\\_Action\\_Program.pdf](http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf)

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

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

### ***CEQA Conclusion***

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

# Greenhouse Gas Reduction Strategies

## AB 32 Compliance

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

set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways,



including \$100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today’s level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO<sub>2</sub> reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in The Mobility Pyramid (*shown above*).

The Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; the Department is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U. S. EPA and ARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the UC Davis.

The table below summarizes the Department and statewide efforts that the Department is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Climate Change/CO2 Reduction Strategies						
Strategy	Program	Partnership		Method/Process	Estimated CO <sub>2</sub> Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. The Department of Transportation (the Department) and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

2. According to the Department's Standard Specifications, the contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations in regards to air quality restrictions.

This project is exempt from all air quality emission analysis (Pavement Resurface) requirements per Table 2 of 40 Code of Federal Regulations (CFR) §93.126.

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM<sub>10</sub>, would be the primary short-term construction impact, which may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature. Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction. The provisions of Section 14-9.01, Air Pollution Control, and Section 14-9.02 Dust Control require the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.

### ***Adaptation Strategies***

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

At the Federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the United States (U. S.) to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the Federal Government implement actions to expand and strengthen the Nation’s capacity to better understand, prepare for, and respond to climate change.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This Executive Order set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop *The California Climate Adaptation Strategy* (Dec 2009)<sup>6</sup>, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010<sup>7</sup> to advise how California should plan for future sea level rise. The report is to include:

---

<sup>6</sup> <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

<sup>7</sup> The Sea Level Rise Assessment report is currently due to be completed in 2012 and will include information for Oregon and Washington State as well as California.

- relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- a discussion of future research needs regarding sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Until the final report from the National Academy of Sciences is released, interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as the Department as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. An NOP was not filed for this project. The project is programmed for construction in 2013.

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

Currently, the Department is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once

statewide planning scenarios become available, the Department will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. The Department is an active participant in the efforts being conducted in response to Executive Order S-13-08 and is mobilizing to be able to respond to the National Academy of Science report on Sea Level Rise Assessment which is due to be released in 2012.

## List of Preparers

---

The following Caltrans North Region staff contributed to the preparation of this Initial Study:

**Cassandra Pitts**, Environmental Planner. Contribution: Environmental Study Coordinator and Document Writer

**Sandra Rosas**, Senior Environmental Planner. Contribution: Environmental Branch Chief M2

**Erick Wulf**, Associate Environmental Planner (Archaeology). Contribution: Cultural Resources Compliance Document

**Jennifer Olah**, Associate Environmental Planner (Natural Science). Contribution: Project Biologist, Natural Environment Study

**Alicia Beyer**, Transportation Engineer. Contribution: Hazardous Waste Initial Site Assessment

**Sean Cross**, Transportation Engineer. Contribution: Water Quality Assessment Exemption (NPDES)

**Michael Dewall**, Hydraulics Engineer. Contribution: Floodplain Hydraulics Study

**Kathleen Grady**, Landscape Associate. Contribution: Visual Impact Assessment

**Mike Panchesson**, Associate Transportation Engineer. Contribution: Project Engineer

**Nadarajah Suthahar**, Project Manager. Contribution: Project Manager

**Najed Dakak**, Project Manager. Contribution: Former Project Manager

## Distribution List

---

U. S. Army Corps of Engineers  
Attn: Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, CA 95814-2922

California Department of Fish and Game  
Region 2  
1701 Nimbus Road, Suite A  
Rancho Cordova, CA 95670

Regional Water Quality Control Board  
Central Valley Region (5)  
11020 Sun Center Drive, #200  
Rancho Cordova, CA 95670-6114

Office of Planning and Research  
State Clearinghouse and Planning Unit  
P.O. Box 3044  
Sacramento, CA 95812-3044

Plumas County Library  
445 Jackson Street  
Quincy, CA 95971

Loyalton Library  
511 Main Street  
Loyalton, CA 96118

Portola Library  
34 Third Street  
Portola, CA 96122

Mr. William Jamison  
P.O. Box 40  
O'Neals, CA 93645-0040

# Appendix A CEQA Checklist

## CEQA Environmental Checklist

<b>03-SIE-49</b>	<b>48.3/49.2</b>	<b>4E540</b>
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS:</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***"No Impact" determinations in this section are based on the Visual Impact Assessment which was prepared on 4/20/11. Avoidance and minimization measures have been incorporated into the project and are listed in Appendix B.***

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?

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

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

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

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

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

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

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

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

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

***“No Impact” determinations in this section are based on the scope and location of the project.***

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

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

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

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

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the findings in the Air Quality Report, prepared 7/20/11.***

**IV. BIOLOGICAL RESOURCES:** Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***The determinations in this section are based on the Natural Environmental Study (NES), October, 2011. Discussion of impacts is included in the “Avoidance, Minimization, and/or Mitigation” section of this Initial Study.***

**V. CULTURAL RESOURCES:** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	-------------------------------------

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the Cultural Resources Report which was prepared on 3/28/11.***

**VI. GEOLOGY AND SOILS:** Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

***“No Impact” determinations in this section are based on the scope and location of the project.***

**VII. GREENHOUSE GAS EMISSIONS:** Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project’s direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the information contained in the Initial Site Assessment, prepared on 6/23/09 and revised on 4/14/11. Avoidance and minimization measures have been incorporated into the project and are listed in Appendix B.***

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Water Quality**

*The determinations in this section are based on the Water Quality Assessment Exemption which was completed on 8/15/11. With the implementation of avoidance and minimization measures no water quality impacts are anticipated. Avoidance and minimization measures have been incorporated into the project and are listed in Appendix B.*

**Flood Hazard Area**

*“No Impact” determinations in this section are based on the Floodplain Hydraulic Study which was completed on 4/28/10.*

*The Federal Emergency Management Agency (FEMA) designates much of Sierraville Creek, as it enters the Sierra Valley; along with significant channel overflow areas to the west and east of the main channel, as 100-year floodplain. The northern portion of the most easterly lobe of the Sierraville Creek floodplain extends into the limits of the proposed project.*

*The FEMA Flood Insurance Rate Map for Sierra County, California, Community Panel 06091C 0205A (dated September 1, 1988) depicts the floodplain for Sierraville Creek, and its overflow areas, along SR 49 near the Town of Sierraville. The floodplain for Sierraville Creek is designated by FEMA as Flood Hazard Zone A, “no base flood elevations determined”. The remainder of this panel is depicted as Zone C, “areas of minimal flooding”.*

*Community Panel 06091C 0205A indicates one encroachment for SR 49 into the Sierraville Creek expanded floodplain within the project limits. This transverse encroachment extends from approximately 2600 feet northeast of the intersection of SR 49 and Lemon Canyon Road for approximately 1200 feet (PM 48.36 to 48.58).*

**X. LAND USE AND PLANNING:** Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the scope and location of the project.***

**XI. MINERAL RESOURCES:** Would the project:

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

***“No Impact” determinations in this section are based on the scope and location of the project.***

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

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

***“No impact” determinations in this section are based on the Noise Evaluation which was completed on 7/20/11.***

**XIII. POPULATION AND HOUSING:** Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	-------------------------------------

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the scope and location of the project.***

**XIV. PUBLIC SERVICES:**

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the scope and location of the project.***

**XV. RECREATION:**

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the scope and location of the project.***

**XVI. TRANSPORTATION/TRAFFIC:** Would the project:

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

***“No Impact” determinations in this section are based on the scope and location of the project.***

**XVII. UTILITIES AND SERVICE SYSTEMS:** Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

***“No Impact” determinations in this section are based on the scope and location of the project.***

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

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

## **Appendix B Avoidance Minimization Measures**

---

Avoidance and minimization measures would be implemented as part of construction activities to minimize and avoid impacts to the following resources:

### **Aesthetics**

1. All areas disturbed or used for staging of vehicles and equipment shall be hydro-seeded and restored to its natural condition upon completion of the project. This can best be accomplished by re-contouring areas and applying erosion control (type hydro-seed) if needed.
2. The areas impacted by culvert work that results in vegetation disturbance will need to be restored or protected in order to prevent erosion control. The best way to accomplish this is to re-vegetate the disturbed area with a hydro-seed and possibly rock slope protection. The hydro-seed shall consist of a native seed mix.

### **Hazardous Waste**

1. A project-specific lead compliance plan must be implemented by the contractor to prevent or minimize worker exposure and to properly manage the handling of aerially deposited lead, thermoplastic, paint stripe, and pavement marking.

### **Hydrology and Water Quality**

1. The disturbed soil area (DSA) has been calculated by the project engineer and is less than 1.0 acre. As required by the Central Valley Regional Water Quality Control Board (CVRWQCB), a Caltrans approved Water Pollution Control Plan (WPCP) will be prepared, which specifies the level of temporary pollution control measures for the project. Temporary Construction Site Best Management Practices (BMP's), may be required and incorporated into the plans, as determined by the project engineer. A WPCP is expected to be required in the project plans. If the project scope changes or the DSA equals or exceeds 1 acre, then Standard Special Provision (SSP) 07-345 Water Pollution Control (Storm Water Pollution Prevention Plan) shall be included.
2. All projects within Caltrans' right-of-way are required to comply and adhere to the National Pollutant Discharge Elimination System (NPDES) permit, Order No. 99-06-DWQ. Additional NPDES requirements and BMPs (temporary and permanent) may be required if

the scope of the project changes, if (at any stage) construction operations pose a risk to water quality, and/or the Central Valley Regional Water Quality Control Board deems it necessary.

3. Surplus material and grindings generated by the project will become the property of the contractor. Asphalt concrete grindings shall be handled and disposed of in accordance with local, state, and federal laws and regulations. No asphalt concrete grindings shall be allowed to enter or be placed where it may be washed by rainfall or runoff into waterways. This includes the use for shoulder backing, turnouts and wide areas for lateral support, parking areas, and suitable fill and stabilization projects.

## **Biology**

1. Wetlands and other waters of the U. S. located adjacent to the work areas would be protected during construction by clearly identifying the resources as environmentally sensitive areas (ESAs) and installing construction barrier fencing (including sediment fencing, where appropriate). Before construction, a qualified biologist would identify the locations of the barrier fencing and would mark those locations with stakes or flagging. The barrier fencing would be in place before construction activities are initiated. The fencing would be maintained throughout the duration of the construction period. If the fencing is removed, damaged, or otherwise compromised during the construction period, construction activities would cease until the fencing is replaced.
2. Impacts to wetlands and other waters of the U. S. would be mitigated through the restoration and/or enhancement of the project area. Areas disturbed for access and construction would be stabilized and revegetated at the completion of construction in order to minimize erosion and restore functions and values of the habitat.
3. The Plumas ivesia plants would be designated as ESAs and would be protected during construction of the proposed project.
4. The Sierra Valley evening-primrose plants would be designated as ESAs and would be protected during construction of the proposed project.
5. The following measures would be incorporated into the project in order to protect the Sierra Nevada yellow-legged frog and its habitat during construction:
  - a. A survey for Sierra Nevada yellow-legged frogs would be conducted prior to the start of construction.

- b. Silt fencing or other fine-mesh plastic fencing would be installed, as feasible, to exclude Sierra Nevada yellow-legged frogs from entering the work areas.
  - c. Screens (1/8 inch mesh or finer) would be placed over dewatering pump intakes to avoid uptake of Sierra Nevada yellow-legged frogs eggs and tadpoles.
  - d. A biological monitor would be on-site to ensure that no Sierra Nevada yellow-legged frogs, or other aquatic species, are stranded or trapped within work areas during dewatering.
6. The following measures would be incorporated into the project in order to protect the burrowing owl during construction:
  - a. A survey for burrowing owls would be conducted prior to the start of construction.
  - b. If project activities would affect occupied burrowing owl burrows during August through February, the owls would be passively relocated from burrows using one-way doors. One-way doors would be in place for a minimum of 48 hours before burrows are excavated.
  - c. If project activities would affect occupied burrows or disrupt reproductive behavior during the nesting season (March through July), construction would be delayed within 300 feet of occupied burrows until it is determined that the owls are not nesting or that juvenile owls are self-sufficient or are no longer using the burrow as their primary source of shelter.
7. The following measures would be incorporated into the project in order to protect the Swainson's hawk during construction:
  - a. A survey for active Swainson's hawk nests would be conducted prior to the start of construction.
  - b. If an active Swainson's hawk nest is found, no intensive new disturbances (such as heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project-related activities that may cause nest abandonment or forced fledging would be initiated within 600 feet (buffer zone) of

the nest between March 1 and September 15. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active.

8. The following measures would be incorporated into the project in order to protect the greater sandhill crane during construction:
  - a. A survey for nesting greater sandhill cranes would be conducted prior to the start of construction.
  - b. If an active greater sandhill crane nest is found, a no-disturbance buffer would be established around the site to avoid disturbance or destruction of the nest site until the young have fledged and moved out of the project area.
9. The following measures would be incorporated into the project in order to protect the migratory birds during construction:
  - a. A survey for nesting migratory birds would be conducted prior to the start of construction.
  - b. If active nests are found in the survey area, a no-disturbance buffer would be established around the site to avoid disturbance or destruction of the nest site until the young have fledged and moved out of the project area.
10. The following measures would be incorporated into the project in order to prevent the introduction and spread of invasive plant species:
  - a. Educate construction supervisors and managers on the importance of controlling and preventing the spread of invasive weeds.
  - b. Wash construction vehicles and equipment offsite before arriving at the construction site. If vehicles or equipment leave the construction site prior to the end of the proposed project's construction period, they would be washed prior to re-entry.
  - c. Minimize surface disturbance to the greatest extent feasible to complete the work.
  - d. Use erosion control materials (e.g., straw wattles) that are weed-free or contain less than 1% weed seed.