

# Lake Britton Bridge Replacement Project

Shasta County, California  
District 2-SHA-89-PM 26.3/30.7  
325600

## Initial Study/ Environmental Assessment



Prepared by the  
State of California Department of Transportation  
and the  
U.S. Department of Transportation  
Federal Highway Administration

**June 2006**



# General Information About This Document

## *What's in this document?*

The California Department of Transportation (Caltrans) and the Federal Highway Administration have prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of alternatives being considered for the proposed project located in Shasta County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, potential impacts from each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

## *What should you do?*

- Please read this Initial Study/Environmental Assessment. Additional copies of this document as well as the technical studies are available for review at the Caltrans district office at 1657 Riverside Drive, Redding.
- Attend the public information meeting.
- We welcome your comments. If you have any concerns regarding the proposed project, please attend the public information meeting, or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

Tom Balkow, Environmental Branch Chief  
Office of Environmental Management - MS 30  
California Department of Transportation  
P.O. Box 496073  
Redding, CA 96049-6073

Submit comments via email to: [thomas\\_balkow@dot.ca.gov](mailto:thomas_balkow@dot.ca.gov).

- Submit comments by the deadline: August 31, 2006.

## *What happens next?*

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

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: Tom Balkow, Office of Environmental Management - MS 30, P.O. Box 496073, Redding, CA 96049-6073; (530) 225-3405 Voice, or use the California Relay Service TTY number, (530) 225-2019.

Replace bridge #6-52 and rehabilitate roadway, in Shasta County near Burney, on State Route 89 from post mile 26.3 north of Clark Creek Road to post mile 30.7 at Soldier Mountain Lookout Road

**INITIAL STUDY/  
ENVIRONMENTAL ASSESSMENT**

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

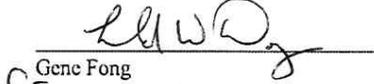
THE STATE OF CALIFORNIA  
Department of Transportation

U.S. DEPARTMENT OF TRANSPORTATION  
Federal Highway Administration

6/15/06  
Date of Approval

  
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6/28/2006  
Date of Approval

  
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Division Administrator  
Federal Highway Administration

# Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

## **Project Description**

The California Department of Transportation (Caltrans) proposes to replace the Lake Britton Bridge and upgrade this segment of State Route 89 to meet current highway design standards.

## **Determination**

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

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

The proposed project would have no effect on Growth, Paleontology, and Cumulative Impacts.

In addition, the proposed project would have no significant effect on Land Use, Timberland, Community Impacts, Utilities/Emergency Services, Traffic and Transportation/Pedestrian and Bicycle Facilities, Cultural Resources, Hydrology and Floodplain, Geology/ Soils/ Seismic/ Topography, Hazardous Waste/Materials, Air Quality, Noise and Vibration, Wetlands and Other Waters, Plant Species, Animal Species, and Threatened and Endangered Species.

The proposed project would have no significantly adverse effect on Visual and Aesthetic Resources, Water Quality and Storm Water Runoff, Invasive Species, and Construction Impacts because the following mitigation measures would reduce potential effects to insignificance:

- Revegetation of disturbed cuts, fills and abandoned roadbeds
- Use of Best Management Practices (BMPs)
- Bridge demolition after new bridge is opened
- Use of a bubble curtain at the bridge site to attenuate sound and protect aquatic resources

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Brian Crane  
District Director  
District 02  
California Department of Transportation

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Date

## Summary

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose to replace the Lake Britton Bridge and construct 2.7 miles of new highway to conform State Route 89 (SR89) to the new bridge alignment and grade. Once the new bridge and highway are constructed, portions of the old highway alignment will be relinquished. The existing bridge will be removed. This project is located on SR89 in Shasta County, about 10 miles north of Burney, between post miles 26.3 and 30.7.

The study includes one build alternative—Alternative 1—and the no-build alternative. The build alternative includes the replacement of the Lake Britton Bridge and the realignment of SR89 from just north of Clark Creek Road south of Lake Britton to Soldier Mountain Lookout Road north of the lake. With this alternative, the replacement bridge will be 203 feet higher than the existing Lake Britton Bridge. The new alignment will have 8-foot shoulders and bypass McArthur-Burney Falls Memorial State Park, passing through U.S. Forest Service land, Pacific Gas and Electric property, and some private property. Road connections to the State Park, Dusty Point Campground, Pines Picnic/Jamo Point Boat Ramp and private residences will be upgraded to improve safety and match the new highway improvements. Overhead and underground utility lines will be relocated.

The no-build alternative perpetuates existing nonstandard conditions. The existing bridge is at the end of its service life and is seismically nonstandard. Maintenance of this segment of highway with bridge and underpass structures that have nonstandard weight, height, and width allowances will continue. Vehicle use restrictions will continue because of the nonstandard allowances. Maintenance services to the existing highway facility will continue at increasing annual costs. State Route 89 will continue to pass the State Park entrance on the curved “loop” alignment. Traffic safety on SR89 will continue to deteriorate as traffic volumes increase.

The proposed build alternative would have potential environmental impacts, both beneficial and adverse. Potential beneficial impacts include 1) moving the state highway away from the Falls, an action that is fully supported in the McArthur-Burney Falls Memorial State Park General Plan; 2) opening the viewshed by minimizing through-cuts and steep grades; 3) tying in 8-foot shoulders with highway improvements to the north and south; 4) building a bridge with no piers in the water,

Summary

and 5) improving the handling of drainage and storm water runoff. Potential adverse impacts include 1) affecting visual and aesthetic resources, 2) affecting biological resources, and 3) permanently impacting 44 acres of U.S. Forest Service land. The potential environmental impacts of the build alternative are compared to the existing conditions of the no-build alternative in the following table.

Potential Impact	Alternative 1	No-Build Alternative
<b>Consistency with</b> <ul style="list-style-type: none"> <li>• Regional Transportation Plan (RTP)</li> <li>• Transportation Concept Report (TCR)</li> </ul>	Consistent with RTP and TCR, replaces structurally deficient bridge.	Inconsistent with RTP and TCR, does not address need for a bridge upgrade.
	..Constructs new bridge that meets all current highway design standards.	
	Ties in 8-ft shoulders with improvements to the north and south.	Alignment lacks shoulders in the project area.
	Reduces number of miles in State's highway inventory.	No effect
<b>Cost</b>	Substantial cost to replace bridge.	Continued maintenance costs to prevent bridge and roadway failure.
<b>Parks and Recreation</b>	Alignment moves away from Burney Falls, improving the Park visitor's experience.	Alignment remains near Burney Falls, in conflict with State Park planning documents.
	Temporary closures or use restrictions during construction affect access to five recreational resources: Jamo Point, Dusty Campground, Pacific Crest Trail, Pines Picnic Area, and boating on Lake Britton. ..Permanently changes access to Jamo Point, Pines Picnic Area, Dusty Campground, private residences, and railroad tracks.	No effect
<b>Timberlands</b>	Acquires 35 acres of privately owned timberland in Timberland Production Zones for the realigned highway.	No effect
<b>Utility Service Relocation</b>	Relocates some electric, telephone, and fiber-optic lines.	No effect
<b>Traffic and Transportation/ Pedestrian and Bicycle Facilities</b>	Higher roadway profile north of the bridge requires a road connection at the top of the hill, across from Soldier Mt Lookout Rd, for access to the abandoned highway section (and Jamo Point, Pines Picnic Area, Dusty Campground, private residences, and railroad tracks).	The nonstandard segment of SR89 north of the bridge remains; access to Pines Picnic Area/Jamo Point Boat Ramp and Dusty Campground does not change.
	Alignment has smooth large radius curves.	Alignment has nonstandard curves.

Potential Impact	Alternative 1	No-Build Alternative
<b>Traffic and Transportation/ Pedestrian and Bicycle Facilities (continued)</b>	Minimizes steep grades; reduces the grade north of the bridge from 5% to 3.8%; substantially improves the steep grade just south of the bridge.	Steep grades remain nonstandard; no change to the 5% grade north of the bridge; no change to the steep grade south of the bridge.
	Traveler safety increases because of improved vertical and horizontal alignment in mountainous terrain.	No safety improvements as existing nonstandard vertical and horizontal alignment remains; current accident rate expected to continue.
	8-ft shoulders on new structure improves safety, provides for bicycle and pedestrian traffic, allows disabled vehicles to move off the traveled way, and provides for maintenance and incident response. ..Increases clear recovery.	Shoulder width in the project area remains nonstandard.
	Shortens travel distance; 4 minutes in time savings for each through trip.	No time savings for each through trip.
	Constructs bridge that meets permit load capacity. ..Lifts permit load traffic restrictions.	Existing bridge does not meet permit load capacity. ..Permit load traffic is prohibited.
	Eliminates traffic queues on SR89 at State Park entrance.	Seasonal traffic queues form on SR89 at State Park entrance.
	<b>Visual and Aesthetic Resources</b>	Profile provides an open view onto the bridge in both travel directions.
Substantially higher bridge profile and new bridge design.		No change to bridge profile or aesthetics.
Vegetation removal		No effect
New cut and fill slopes		Visual character remains the same.
Abandoned roadway created by new alignment.		No effect
Places new guardrail.		No effect
Temporary material stockpiles within highway corridor.		No effect
Includes access road construction.		No effect
<b>Cultural Resources</b>	Burney Falls is a resource removed from SR89.	Burney Falls is a resource near SR89.
<b>Hydrology and Floodplain</b>	Constructs bridge piers outside the water.	Existing bridge piers are in the water.
<b>Water Quality and Storm water Runoff</b>	Improves handling of drainage and storm water runoff.	No change to drainage and storm water runoff.
<b>Geology/Soils/Seismic/ Topography</b>	Constructs bridge that meets current seismic standards.	Existing bridge does not meet current seismic standards and remains fracture critical.

Potential Impact	Alternative 1	No-Build Alternative
<b>Geology/Soils/Seismic/ Topography (continued)</b>	Constructs higher bridge that stays above the steep banks.	SR89 bridge is built into steep banks that drop directly into the lake along much of the shoreline.
<b>Hazardous Waste/Materials</b>	Eliminates lead paint.  ..Uses preventive measures to avoid release of lead in old paint when the existing bridge is demolished.	Old paint on the bridge contains lead. ..Requires periodic maintenance to dispose of lead in old paint on the existing bridge and in soil below the bridge.
<b>Air Quality</b>	Generates particulate matter during construction. Must implement dust control practices due to State PM <sub>10</sub> non-attainment.	Project is located in a State PM <sub>10</sub> non-attainment area.
<b>Noise and Vibration</b>	Traffic noise the same with or without the project. Minimization measures recommended for construction noise: restricting work times, placing and staging of equipment away from receptors, and keeping residents informed. ..Traffic noise from SR89 will be eliminated at the State Park.	Noise levels slightly higher than existing roadway due to traffic increases (20 year build). ..Existing levels well below Noise Abatement Criteria.
<b>Natural Communities</b>	Net loss of regionally common upland natural communities. ..No loss of any unique or special-status communities.	No effect
<b>Wetlands and other Waters</b>	Minor net loss of ephemeral (non-riparian) channels. ..Net gain of perennial riparian vegetation.	No effect
<b>Plant Species</b>	Minimal impact	Minimal impact
<b>Animal Species</b>	Minor net loss of habitat for non special-status species.	No effect
<b>Threatened and Endangered Species</b>	Potential net gain in habitat quality for Bald eagle and Northern spotted owl.	No effect
	Potential impacts to Rough sculpin will be avoided.	No effect
<b>Invasive Species</b>	Removes locally common weeds during excavation for highway improvements.	Continuing presence of 'C-rated' noxious weeds.
<b>Construction</b>	Temporary effects to Biological resources, Noise, Air Quality, and Visual aesthetics.	No effect

## Table of Contents

Proposed Mitigated Negative Declaration .....	ii
Summary.....	iii
Table of Contents .....	vii
List of Figures.....	ix
List of Tables.....	ix
List of Technical Studies that are Bound Separately .....	x
List of Abbreviated Terms.....	xi
<b>Chapter 1</b> Proposed Project .....	1
1.1 Introduction.....	1
1.2 Purpose and Need .....	1
1.2.1 Purpose .....	2
1.2.2 Need.....	2
1.3 Alternatives.....	7
1.3.1 Build Alternative .....	8
1.3.2 No-Build Alternative.....	10
1.3.3 Alternatives Considered and Withdrawn.....	11
1.4 Permits and Approvals Needed.....	12
<b>Chapter 2</b> Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures.....	15
2.1 Human Environment.....	16
2.1.1 Land Use and Planning.....	16
2.1.2 Timberlands.....	19
2.1.3 Community Impacts .....	19
2.1.4 Visual/Aesthetics.....	22
2.1.5 Cultural Resources.....	26
2.2 Physical Environment.....	28
2.2.1 Hazardous Waste Materials.....	28
2.2.2 Air Quality.....	30
2.2.3 Noise and Vibration.....	32
2.3 Biological Environment.....	36
2.3.1 Wetlands and Other Waters.....	36
2.3.2 Threatened and Endangered Species .....	39
2.3.3 Invasive Species .....	44
<b>Chapter 3</b> Comments and Coordination .....	47
<b>Chapter 4</b> List of Preparers.....	49
<b>Appendix A</b> California Environmental Quality Act Checklist.....	51
<b>Appendix B</b> Resources Evaluated Relative to the Requirements of Section 4(f) ...	67
<b>Appendix C</b> Title VI Policy Statement.....	69
<b>Appendix D</b> Minimization and/or Mitigation Summary .....	71
<b>Appendix E</b> Design Layouts for the Proposed Project.....	77
<b>Appendix F</b> Special Status Species in Project Area.....	81
<b>Appendix G</b> Correspondence.....	93

**Appendix H** All-American Road Designation..... 99  
**Appendix I** United States Forest Service Fire Plan..... 101

## List of Figures

Figure 1-1 Project Vicinity Map.....	3
Figure 1-2 Project Location Map.....	5
Figure 2-1 Project Area Zoning Map.....	17

## List of Tables

Table 2.1 Visual Quality Recommendations .....	26
Table 2.2 Activity Categories and Noise Abatement Criteria .....	33
Table 2.3 Typical Noise Levels .....	34

## **List of Technical Studies that are Bound Separately**

Noise and Air Quality Report

Water Quality Report

Natural Environment Study

- Bald Eagle Biological Assessment and USFWS Concurrence
- Northern Spotted Owl Biological Assessment and USFWS Concurrence
- Special Status Species List

Location Hydraulic Study

Historic Property Survey Report

- Archaeological Survey Report, including Bridge Status Listing

Hazardous Waste Reports:

- Initial Site Assessment
- Preliminary Site Investigation (Geophysical Survey)

Visual Assessment Assessment

Community Impact Assessment

## List of Abbreviated Terms

APE	Area of Potential Effect
BMPs	Best Management Practices
Cal/OSHA	California Occupational Safety and Health Act (1973)
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
C-rated	A category of noxious weeds as rated by the California Department of Food and Agriculture; “C”=State endorsed holding action and eradication only when found in a nursery
CRZ	Clear Recovery Zone
ESA	Environmentally Sensitive Area
FHWA	Federal Highway Administration
ft	foot/feet
HPSR	Historic Property Survey Report
I-5	Interstate 5
NAHC	Native American Heritage Commission
NEIC	Northeast Information Center
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NSB	National Scenic Byways
PCT/PCTA	Pacific Crest National Scenic Trail/Pacific Crest Trail Association
PG&E	Pacific Gas & Electric Company
PM	post mile <i>or</i> particulate matter
PM <sub>10</sub>	particulate matter less than 10 microns in size
PQS	Professionally Qualified Staff
RTP	Regional Transportation Plan
SCAQMD	Shasta County Air Quality Management District
Section 4(f)	Publicly owned properties that are protected under the U.S. Department of Transportation Act of 1966
SHPO	State Historic Preservation Officer
SR	State Route
SSPs	Standard Specification Plans
STAA	Surface Transportation Assistance Act
State Park	McArthur-Burney Falls Memorial State Park
TCR	Transportation Concept Report
TL	timberland districts
TMP	Traffic Management Plan
TPZ	Timberland Production Zone
U.S. EPA	United States Environmental Protection Agency
USC	United States Code
USFS	United States Forest Service
USFWS	U.S. Fish and Wildlife Service
VA	Value Analysis



# **Chapter 1**      **Proposed Project**

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## **1.1 Introduction**

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose to replace the Lake Britton Bridge #6-0052 and construct 2.7 miles of new highway to conform State Route 89 (SR89) to the new bridge alignment and grade. These improvements would upgrade the existing two-lane highway to meet current highway design standards. Once the new bridge and highway are constructed, the old highway alignment will be relinquished. The existing bridge will be removed. This project is located on SR89 in Shasta County, about 10 miles north of Burney, between post miles 26.3 and 30.7. The alignment of the existing highway imposes driving restrictions such as limited sight distance and difficulties in negotiating sharp curves and steep grades. The proposed improvements include curve alignment modifications. Figures 1-1 and 1-2 show project vicinity and location maps.

This project is included in the Fiscal Year 2005/2006 Federal Statewide Transportation Improvement Program (FSTIP) and is proposed for funding from the State Highway Operation Protection Program (SHOPP). It is also included in the Metropolitan Transportation Commission's (MTC) 2004 Regional Transportation Plan (RTP).

## **1.2 Purpose and Need**

The purpose of the project is to meet current highway design standards on SR89 and provide a safer transportation facility for the traveling public. The project is needed to protect SR89 continuity and allow permit load traffic across Lake Britton, where the existing bridge is a deficient riveted steel deck truss structure built in 1938 that has reached the end of its service life and has chronic fatigue failures in the floor beam connections. Permit load traffic is prohibited due to the nonstandard width and structural deficiency of the existing bridge. This problem cannot be reasonably addressed without replacing the structure.

In addition to the deficient bridge, the project addresses several other nonstandard features. Motorists encounter less than standard sight distance, changes in speed between curves, and increased possibility of skidding, especially during the winter

months. A portion of the roadway south of the bridge is shaded by embankment cut, which delays snow and ice melt and exhibits rock fall issues. The railroad underpass north of the Lake Britton Bridge has nonstandard horizontal and vertical clearances. The accident rate for this segment of SR89 is 3.26 times higher than the statewide average.

Retrofitting the existing 1938 structure was considered but rejected as a feasible alternative due to the age and style of the bridge. This project is compatible with planned future improvements to SR89, which is designated as a Scenic Byway and an All-American Road, and is recommended as a Focus Route in the District 2 State Route 89 Transportation Concept Report (2002).

### 1.2.1 Purpose

The purpose of the project is to improve safety and operations on SR89 in the project area. The specific objectives of the proposed action are to

- Ensure continuous traffic flow on the regional transportation system by replacing a deficient bridge structure.
- Raise the bridge grade to travel above the railroad tracks to allow passage of permitted trucks.
- Realign the highway to match the alignment of the new bridge and improve nonstandard highway features (e.g., short radius curves, vertical and horizontal curve sight distances, superelevation transitions, shoulder widths, compound curves, design speed changes between successive curves, minimum length vertical curves, and nonstandard vertical and horizontal clearance underneath the railroad underpass).
- Construct a new bridge and roadway to be consistent with current highway design standards and state and local transportation plans and programs.

### 1.2.2 Need

The project is needed to protect SR89 as a vital linkage route. It is the detour route during closures of Interstate 5 (I-5) in the Sacramento River Canyon. SR89 connects I-5 and SR36, SR44, SR70 and SR299; I-5 and U.S.395; and links interstate traffic in Oregon, Nevada and California.

The project was initiated due to a deficient bridge structure that has reached the end of its service life. Permit load traffic is prohibited. Structure Maintenance and

Figure 1-1 Project Vicinity Map



	State of California Department of Transportation	Proposed Lake Britton Bridge Replacement
	SHA-89 PM 26.3/30.7 EA 02-32560	On State Route 89 in Shasta County, approximately 10 miles north of Burney







Investigation Reports revealed the need to replace the existing bridge, stating that permit load deficiency cannot otherwise be reasonably addressed. The project is needed to address the following transportation problems and conditions:

- Standardize bridge width, between bridge rails, from existing 24 feet to 40 feet
- Improve vertical and lateral clearances. The existing railroad underpass has a nonstandard vertical clearance of 14.3 feet. The new bridge will span above the railroad tracks, eliminating this deficiency, and exceed vertical and horizontal standard clearances.
- Lift restrictions on permit load traffic.
- Improve safety. The accident rate on this segment of SR89 is 3.26 times higher than the statewide average.
- Preserve access to numerous small communities in northeastern California, as well as to major recreational attractions and resource areas in the local and regional area.
- Maintain SR89 as an emergency detour for all transportation modes when I-5 between Redding and Mt. Shasta is closed.
- Recognize that SR89 in the project area is designated as a Scenic Byway and an All-American Road. Use designated route criteria to guide SR89 improvements.

### 1.3 Alternatives

The project has one build alternative (Alternative 1) and the No-Build Alternative. A multi-disciplinary team developed a range of alternatives to achieve the project purpose and need while avoiding or minimizing environmental impacts. Only Alternative 1, of all the developed alternatives, avoids resources such as wetlands, Section 4(f) properties, cultural sites, and visual impacts. See Section 1.3.3 for a description of rejected alternatives. Further discussion on wetlands, cultural resources, visual resources, and Section 4(f) properties can be found in Chapter 2 and Appendix B.

The project is located in Shasta County on SR89, about 10 miles north of Burney, from PM 26.3 near Clark Creek Road south of Lake Britton, to PM 30.7 near Soldier Mountain Lookout Road north of the lake. Within the limits of the proposed project, SR89 is a conventional two lane undivided highway without shoulders. The purpose of the project is to upgrade the highway to meet current design standards—including replacing a deficient bridge and partially realigning the highway—to improve safety

and correct operational problems incurred as a result of limited sight distance and difficulties in negotiating sharp curves and steep grades. The project area is located at an elevation of approximately 3,000 feet, and is subject to periodic rain and snow.

### **1.3.1 Build Alternative**

The major project features of the proposed build alternative include replacing the Lake Britton Bridge with a 40-ft-wide structure that meets current highway design standards and realigning the road approaches to the bridge to match the new structure alignment and grade. The replacement bridge would be 203 feet higher than the existing Lake Britton Bridge. This alternative bypasses the McArthur-Burney Falls Memorial State Park, connecting to the State Park on a new road connection, and passes through U.S. Forest Service land, Pacific Gas and Electric property, and some private property. The new bridge is designed to pass over the railroad tracks. The new alignment adds 8-foot shoulders and increases sight distance by improving nonstandard curves and superelevation transitions. Road connections to the Dusty Point Campground, Pines Picnic/Jamo Point Boat Ramp and private residences would be upgraded to improve safety and match the new highway improvements. Overhead and underground utility lines would be relocated. Other project features include work off the paved roadway, excavation and paving operations, drainage improvements, temporary access roads, tree and vegetation removal, and right of way acquisition. The Hat Creek Construction Company property on SR89 (PM 25.5) is designated for disposal of excess excavation.

#### **1.3.1.1 Bridge Construction**

The Alternative 1 bridge would be constructed about 500 feet east of the existing bridge. It would have three concrete piers and would connect to a new highway alignment at the south and north ends. The new bridge would be a cast-in-place pre-stressed concrete structure that would have *no piers in the lake*; by comparison, the existing bridge has two piers in the lake.

Construction of the proposed bridge would generally be as follows:

- *Holes (approximately 150 ft deep) will be drilled in the ground at the pier locations (out of the water).*
- *Steel-reinforced concrete will be poured into these holes to create pier footings of about 60 square feet.*
- *Large column forms (wood or steel) will be lifted into place by cranes, placed on top of the footings, and filled with reinforced concrete to create the actual*

*bridge pier column. Cranes can be either barge mounted or shore based or both, depending on conditions.*

- *After the piers are complete, a crane will install equipment on top of the pier column that will allow all superstructure (i.e., deck) construction to be installed using a balanced-cantilever process. This work will be completely isolated from the water and, more important, eliminate the need for an enormous amount (and size) of steel pile for creating concrete forms used in most standard bridge construction.*
- *After the piers and deck are completed, all temporary steel and sheet piles will be removed from the lake.*
- *No blasting will be required.*

There would be three piers for the new bridge but only two (piers 2 and 3) would be in close proximity to the lake. Piers 2 and 3 would be placed on the south and north bank but would be out of the water. Due to the steepness of the south bank/abutment area, construction will require access to this pier location from the lake. This lake access would be implemented via a floating barge and from a steel pile trestle driven (temporarily) into the lake for staging of equipment and materials. Sheet pile would be installed to create a temporary dock/barge landing along the south bank.

The barge would access the lake and be supplied with materials and equipment from the existing Jamo Boat Launch and from a temporary barge landing area on the north shoreline directly under the new bridge. Sheet pile would be temporarily installed at each barge launch area to create a barge dock. The docks would be required for transfer of materials to barges at approximately the same elevation.

The “H” piles used for the work trestle and the “sheet” piles used for the landing would be the smallest size of “driven” pile that can accomplish the task. Even though the bridge itself will be very large, the design only requires the use of a small amount of temporary pile for construction. Normally, a large bridge like this would require an extensive amount of large steel pile, not only for a work trestle, but also for creating “forms” to pour concrete. All percussive pile driving in water and at piers 2 and 3 will occur within an aquatic sound-attenuation-system, commonly referred to as a “bubble-curtain.” Very large cranes would be used in the construction of the piers. Cranes would operate from the barge, from the temporary work trestle, and possibly from the bank itself.

### 1.3.1.2 Bridge Demolition

The existing bridge consists of two concrete piers in the lake with a steel superstructure and a concrete deck. Demolition would occur as follows:

- *The concrete deck would be cut up and removed from the deck itself. A large hoe-ram may be used to break up the concrete deck. A hoe-ram is a large “jack-hammer” mounted on an excavator or backhoe.*
- *The steel superstructure would be cut up and removed. This likely would occur from a barge-mounted crane.*
- *The two concrete piers likely would be demolished using a hoe-ram.*
- *No bridge material would be allowed to fall into the lake during demolition. A barge platform or other containment structure will be in place below the work area to prevent bridge debris from entering the lake.*
- *Any incidental material falling into the lake from the pier demolition would be removed.*
- *The existing piers would be removed to a depth below the lake bottom.*
- *No blasting will be required.*

### 1.3.2 No-Build Alternative

The no-build alternative perpetuates existing nonstandard conditions. This includes maintenance of a segment of highway with bridge and underpass structures that have nonstandard weight, height, and width. Vehicle use restrictions will continue because of the nonstandard allowances. Maintenance services to the existing highway facility will continue at increasing annual costs. SR89 will continue to pass the state park entrance on the curved “loop” alignment. Traffic safety on SR89 will continue to deteriorate as traffic volumes increase.



**Figure 1 Truck accident clean-up at Lake Britton Bridge**

### 1.3.3 Alternatives Considered and Withdrawn

**Alternative 2.** This alternative followed the existing highway alignment more closely than Alternative 1. Similar to Alternative 1, it included construction of a new bridge across Lake Britton, raising the highway grade above the railroad tracks, improving a curvilinear alignment at the south end of the bridge, adding 8-ft shoulders to conform with improvements to the north and south, and relocating some underground utilities. It required cutting trees in front of the State Park to provide a clear recovery zone (CRZ), and constructing a retaining wall at the south end of the new bridge. It was rejected for potential Section 4(f) impacts and potential impacts to cultural resources along the existing nonstandard alignment adjacent to the State Park. (See Appendix B for specific information regarding Section 4(f).)

**Alternative 3.** Similar to Alternatives 1 and 2, Alternative 3 included construction of a new bridge across Lake Britton and raised the highway grade above the railroad tracks. It reconstructed the segment of highway from 1 mile south to 0.4 mile north of the bridge on new alignment, leaving two gaps along SR89 without shoulders (only the reconstructed segment of highway would have 8-ft shoulders). It required a retaining wall near the bridge site, and substantial cut sections in the hill north of the bridge for shoulder widening. It failed to rehabilitate the existing nonstandard highway south of the bridge. It would not comply with the District 2 State Route 89 Transportation Concept Report (2002). This alternative was rejected for not meeting the purpose and need of the project, potential Section 4(f) impacts, and potential impacts to cultural resources along the existing nonstandard alignment adjacent to the State Park.

**Alternative 4.** In 2005, the McCloud Railway Company announced plans to abandon its freight operations. With abandonment of the tracks, Caltrans could develop an alternative that did not raise the highway grade above the railroad tracks. This new alternative lowered the bridge grade and realigned the roadway back toward the State Park, partially crossing State Park land. Because of potential Section 4(f) impacts that do not exist with Alternative 1, FHWA cautioned about continuing with this alternative. In addition, removal of the tracks is uncertain. It is viable that a buyer could come forward and resume operations. This alternative was rejected for potential Section 4(f) impacts, and for not meeting the project purpose and need to realign the highway over the railroad underpass to allow passage of permitted traffic.

## 1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species. ..Review and Comment on 404 Permit	Section 7, Concurrence Letter issued on 12/2/05.
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States.	Application for Section 404 permit anticipated after final ED distribution.
California Department of Fish and Game	1602 Agreement for Streambed Alteration.  ..Section 2080.1 Agreement for Threatened and Endangered Species. Approval to draft water.	Application for 1602 permit anticipated after final ED distribution.  ..Section 2080.1 agreement anticipated after final ED distribution.
California Water Resources Control Board	Water Discharge Permit.	Application for Section 401 permit anticipated after final ED distribution.
United States Forest Service—Lassen National Forest	Compliance with Special Use Permit.  ..Compliance with Fire Plan  ..Agreement to abandon roadway. ..Letter of Concurrence to realign Pacific Crest Trail on Forest property	Application for permit anticipated through Caltrans' Right of Way after final ED distribution.  ..Fire Plan specifications will be incorporated into Caltrans' Plans and Specifications. ..Approval anticipated after final ED distribution. ..Approval anticipated through Caltrans' Right of Way.
McArthur-Burney Falls Memorial State Park	Agreement to abandon roadway.	Approval anticipated after final ED distribution.
Pacific Gas & Electric Company	Approval to draft water. ..Approval to use Jamo Point Boat Ramp/Barge Site during construction. ..Agreement to abandon roadway.	Approval anticipated after final ED distribution.
McCloud Railway	Approval to construct over tracks.	Approval anticipated through Caltrans' Right of Way.
California Department of Boating and Waterways	Compliance with U.S. Coast Guard and boating regulations. ..Periodic closures to boaters underneath bridge construction site.	Approval anticipated after final ED distribution.

Interagency coordination with the USDA-Lassen National Forest has been an integral part of project development. To ensure compliance with NEPA and USFS policy, Caltrans continues to consult and coordinate with Lassen Forest under the direction of the Federal Highway Administration.



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

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This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project and potential impacts from each of the alternatives.

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 these issues in this document.

- **Growth**—This is not a capacity-increasing or growth-producing project. Its purpose is to allow continuous travel on an existing route through an area that is rural in nature and primarily recreational. Opportunities for growth are limited, and would remain limited after construction of this project. The dominance of timberland zoning in this area precludes the use of this land for commercial or residential purposes.
- **Paleontology**—There are no known geologic formations within the project limits that would indicate the presence of paleontological resources.
- **Cumulative Impacts**—There are no past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project, that would result in cumulative impacts as defined under NEPA, 40 Code of Federal Regulations, Section 1508.7 of the Council on Environmental Quality regulations; and under CEQA in Section 15355 of the California Environmental Quality Act Guidelines. The types of land use activities (e.g., residential, commercial, industrial, and highway development, as well as agricultural development and the conversion to more intensive types of agricultural cultivation) that can result in cumulative impacts are largely absent in the project area. This project would be constructed after completion of adjoining shoulder widening projects to the north of south of

this one, thus meeting the District 2 Transportation Concept Report (2002)—a long range planning document that addresses project needs over the next 20 years.

## **2.1 Human Environment**

### **2.1.1 Land Use and Planning**

#### ***Affected Environment***

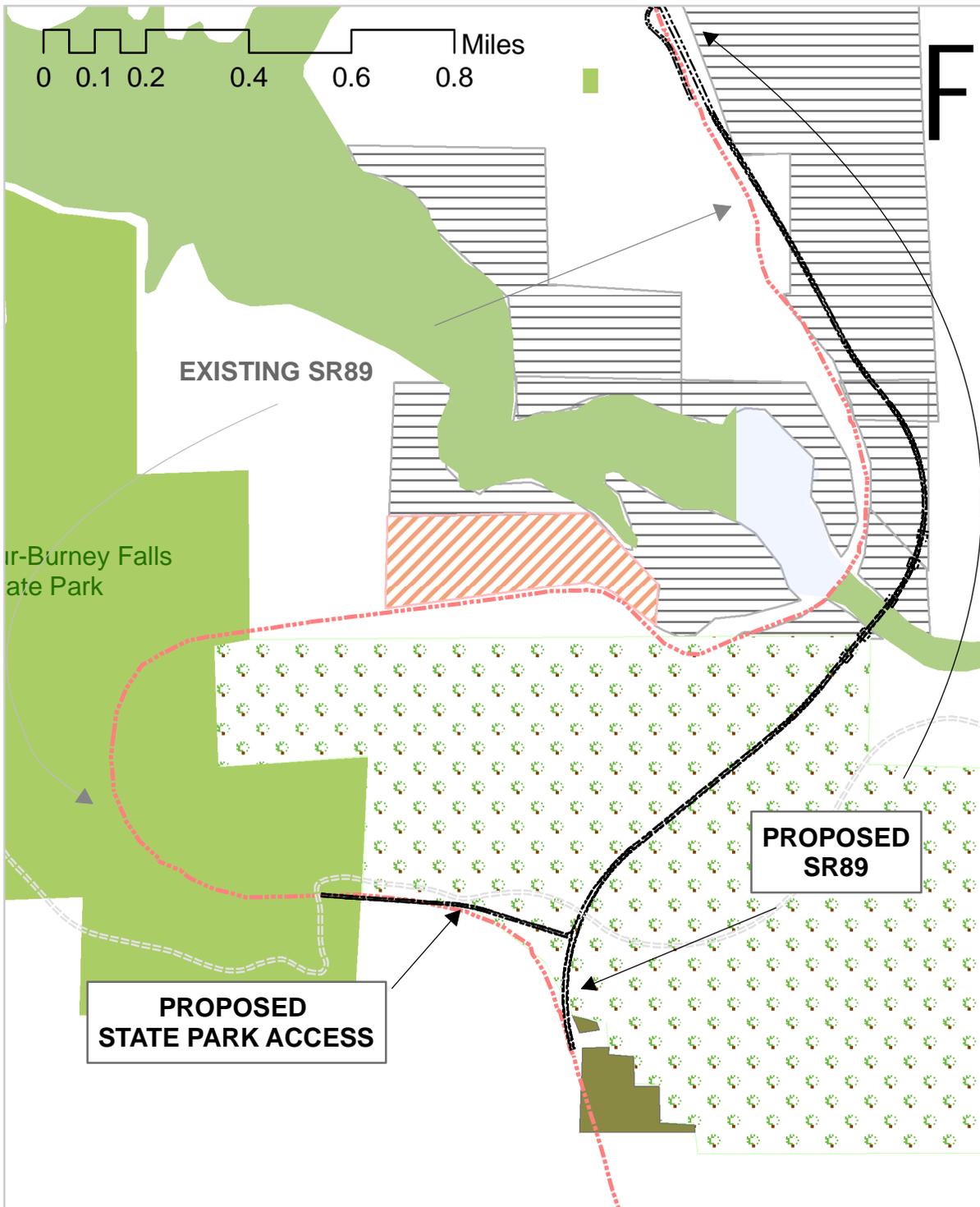
The project is located in unincorporated Shasta County, partially within the boundaries of the Shasta National Forest, which in this area is administered through the Lassen National Forest. It is also adjacent to McArthur-Burney Falls Memorial State Park at SR89 and the Pacific Crest National Scenic Trail. The current alignment of SR89 crosses onto State Park property. The centerpiece of the park is 129-foot Burney Falls. Lake Britton is a man-made lake created by Pacific Gas and Electric (PG&E) in order to generate hydroelectric power. PG&E owns much of the land surrounding the lake. U.S. Forest Service and PG&E are the two largest property owners in the project area. There are two residences along SR89 on the southern end of the project, and a small neighborhood along Clark Creek Road. At the northern end of the project, three residences are located along a secondary road off SR89. The abandoned tracks of the McCloud Railway pass through the project area, crossing over SR89 near Lake Britton.

Zoning on the north side of the lake along the SR89 corridor is largely “Unclassified,” as shown in Figure 2-1. Much of the land has historically been used for timber production. The Shasta County General Plan categorizes much of this area as timberland districts (TL), where development is limited. A single-family home or mobile home is allowed, as are uses related to forest management or agriculture. South of the bridge, much of the land to the east of existing SR89 is owned by Fruit Growers Supply Company, a private landowner. Additional details are available in Caltrans *Community Impact Assessment* (July 2005).

#### ***Impacts***

The project is consistent with the Shasta County General Plan, the County’s Regional Transportation Plan, and the Lassen National Forest Land and Resource Management Plan. The State Park would see a number of benefits as a result of the project, and has prepared a Core Area Development Plan that capitalizes on these benefits. The project

**Figure 2-1 Project Area Zoning Map**



Legend	
	Proposed Project
	Limited Ag
	Exclusive Ag / Preserve
	Residential
	TPZ
	U
	SR89



would not affect the small neighborhood along Clark Creek Road. The project would require a new entrance to the State Park and realignment of the Pacific Crest Trail, which has the approval of the Lassen National Forest.

### **2.1.2 Timberlands**

#### ***Regulatory Setting***

Impacts to timberland are analyzed pursuant to the California Timberland Productivity Act of 1982 (Government Code Sections 51100 et seq.), which was enacted to preserve forest resources. Similar to the Williamson Act, this program gives landowners tax incentives to keep their land in timber production. Contracts involving Timber Production Zones are on 10-year cycles. Although state highways are exempt from provisions of the Act, the California Secretary of Resources and the local governing body are notified in writing in the event that new or additional right-of-way from a Timber Production Zone would be required for a transportation project.

#### ***Affected Environment***

About half of Shasta County's acreage, 1.2 million acres, is made up of commercial forest. Of this, 600,000 acres are included in Timberland Production Zones (TPZs). In the project area, the acreage owned by Fruit Growers Supply Company is included in TPZs. This land is located immediately south of the Lake Britton bridge. Fruit Growers Supply Company was the third largest private holder of TPZ lands in Shasta County in the late 1990s, with over 80,000 acres.

#### ***Impacts***

The project would mean the acquisition of 35 acres of privately owned timberland currently in Timberland Production Zones (TPZ). This is a relatively small amount of timberland within the context of Shasta County's total TPZ land, 600,000 acres, and Shasta County's total supply of timberland, over 1.2 million acres.

### **2.1.3 Community Impacts**

#### ***Regulatory Setting***

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42

United States Code 4331(b)(2)]. The Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

### ***Affected Environment***

The study area encompasses 555 square miles and about 3,300 residents (2000 Census). The nearest community is Burney, an unincorporated city of 3,100 located on SR299 approximately ten miles southwest of the project location. Within the area immediately adjacent to the project, there is a small community of about 80 full-time residents along Clark Creek Road, which runs west of SR89. Together with Forest Route 37N05, Clark Creek Road provides a 7.5 mile alternative route to SR89 in the area, crossing Lake Britton by way of the dam at its extreme western end. Business activity in the area is limited to two recreational vehicle parks and various other small businesses. The city of Burney is the nearest center of commercial activity.

### ***Impacts***

There would be no permanent impacts to residents. The project would not alter community cohesion, circulation patterns, or access to services (other than to recreational facilities during construction). Project construction would mostly take place off the highway. Impacts to residents would be minimal during construction. While the temporary closure of Jamo Point on Lake Britton may mean some reduction in the number of visitors to the area, the addition of construction crews and construction capital to the area would offset this loss. Project construction would affect access to five of the recreational resources in the area:

1. Jamo Point, a boat launch owned and operated by PG&E, would be periodically closed during construction. It would be used for construction staging.
2. Construction on the northern end of the replacement bridge would mean delays for campers driving to and from Dusty Campground, a facility that is owned and managed by the U.S. Forest Service.
3. The Pacific Crest Trail crosses SR89 in this area. Construction may mean minor delays for hikers on this trail during some portions of project construction.
4. Visitors to Pines Picnic Area and residents accessing the two homes off this road may encounter delays while driving to and from their destination because of heavy construction vehicle volumes.
5. Boating on Lake Britton may be restricted in the area under the new and existing SR89 bridges during construction in order to protect boaters from potential hazards of overhead construction.

Access to Jamo Point, Pines Picnic Area, and Dusty Campground would be permanently changed; access to all three would be by way of a single driveway connecting the new SR89 to existing SR89.

McArthur-Burney Falls State Park would benefit from the relocation of SR89. Visitors to Burney Falls would no longer hear traffic noise from the highway. The Park plans to take advantage of the highway's relocation to relocate its office and visitor contact center, and to create separate entrances for day users and campers.

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

The measures below are recommended to minimize construction impacts to local recreational facilities.

1. Limit Jamo Point closure, lake access restrictions, and work adjacent to the Dusty Campground road to weekdays. Visitor use levels are highest on weekends, particularly holiday weekends. Implementing this measure would ensure that most visitors to the area are not affected by construction.

Jamo Point's parking lot is about a half an acre in size, and accommodates 38

- vehicles (including vehicles towing boat trailers). During an average weekend, the lot is half empty. On busy weekends, the lot begins to approach capacity. On an average summer weekend, half of the parking lot (0.25 acres) could be used for equipment and material storage without diminishing the supply of parking spaces relative to the demand for them. If the equipment and materials could be moved to another location on holiday weekends, the majority of Jamo Point users would not be affected by project construction. If this equipment cannot be relocated, allowing use of half of the parking lot would still provide a benefit to many users of this facility.
2. Advertise the use restrictions of Jamo Point and of water crossings under the SR89 bridge through the California Department of Boating and Waterways, press releases, media outlets, and by mailing information to fishing groups in northern California, southern Oregon, and western Nevada.
  3. Discuss with PG&E and the U.S. Forest Service amenities that could be added to Jamo Point after the completion of construction to minimize any major project impacts.

### **Environmental Justice**

This project has been developed in accordance with the Civil Rights Act of 1964, as amended, and Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” No minority or low-income populations have been identified that would be adversely impacted by the proposed project as determined above. Therefore, this project is not subject to the provisions of Executive Order 12898. All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans’ commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director of Caltrans, which can be found in Appendix C of this document.

#### **2.1.4 Visual/Aesthetics**

##### ***Regulatory Setting***

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

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

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

### **Affected Environment**

The study area is on SR89, adjacent to Lake Britton. The highway is surrounded by rolling hills, with predominantly coniferous forests. The understory is fairly open, comprised primarily of squaw’s carpet and manzanita. The ecosystem supports a mixture of conifers and hardwoods. Lake Britton is a popular recreational destination for boating, camping, fishing, hiking and wildlife viewing, with local recreation sites often full on summer weekends. The winter conditions support snowmobiling. This section of highway is part of the Volcanic Legacy Scenic Byway, and an All American Road, and is eligible for the California Scenic Highway System.

The National Scenic Byways (NSB) Program was established under the Intermodal Surface Transportation Efficiency Act of 1991, and reauthorized in 1998 under the Transportation Equity Act for the 21st Century. Certain roads are recognized under this program as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. An All-American Road has two of the qualities listed above and is the highest designation a route can possess. See Appendix F for additional information about All American Roads.

In 2002, three stretches of north state highways already considered scenic byways by the state—including SR89—were added onto a federal scenic byway in Oregon to create the 500-mile Volcanic Legacy Scenic Byway. The bypass loops around Crater Lake, passes by three sides of Mt. Shasta, crosses Lake Britton, goes through Lassen Volcanic National Park, and encircles Lake Almanor. Having All American Road status helps in obtaining grants. In 2006, FHWA announced federal grants for the

Volcanic Legacy Scenic Byway, to be spent on roadside kiosks, marketing and planning for the byway's stretch from the California-Oregon border to Lake Almanor.

### **Impacts**

The project will have short term and long term visual impacts, including new roadway alignments for approaches to the new bridge and the new bridge itself. Utility lines on the existing bridge will need to be relocated, and aerial lines may be an option. A photo of the existing Lake Britton Bridge, as viewed from the approximate centerline of the proposed bridge, looking northwest, can be seen on the cover of this document. Figures 2 and 3 are computer-simulated photos of the Alternative 1 bridge as it might appear above the existing bridge.

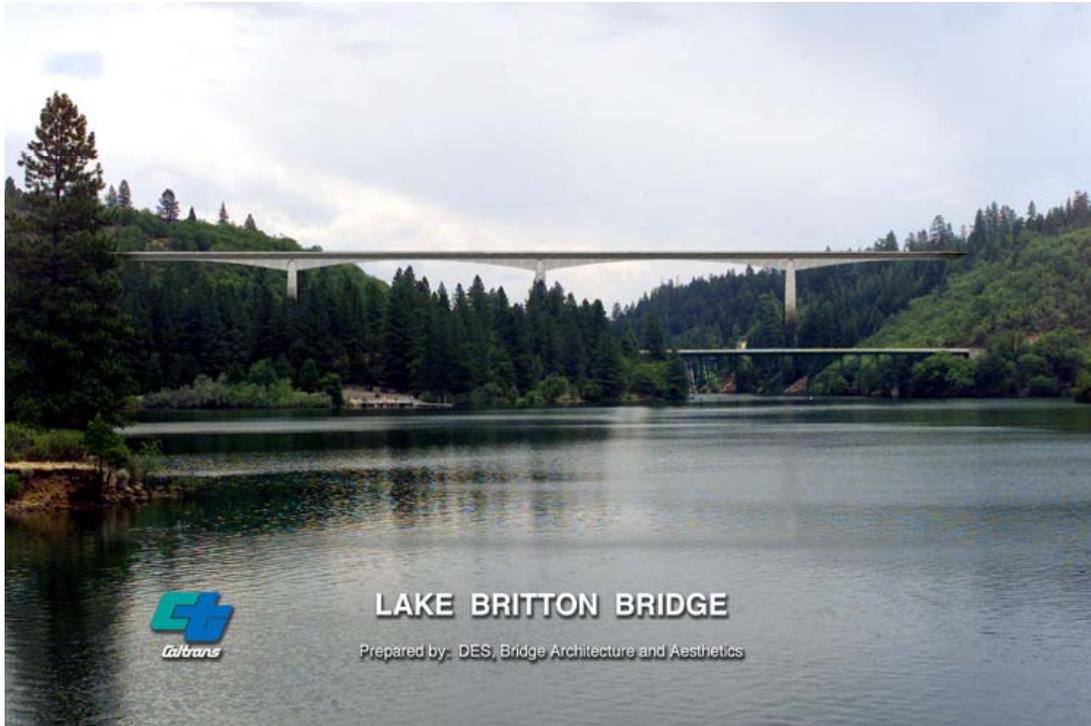
### **Avoidance, Minimization, and/or Mitigation Measures**

Mitigation will be incorporated into the project to minimize impacts. It is important that the character of the existing mix of mature vegetation and meadow be restored as quickly as possible after the completion of construction. Appropriate temporary erosion and sediment control measures will be implemented to minimize adverse impacts to Lake Britton and adjacent properties at the completion of each construction season with a final permanent treatment upon completion of the project. Because of its nationally recognized uniqueness and eligibility for the California Scenic Highway System, all changes to the roadway must be compatible with the existing status as a Scenic Byway and All American Road.

Table 2.1 is a summary of Landscape Architecture's context-sensitive recommendations, as detailed in Caltrans *Visual Impact Assessment* (March 2006). These measures have the support of Caltrans Design team. Implementation of these measures will minimize visual and aesthetic impacts.



**Figure 2 Computer-simulated photo of proposed bridge above existing bridge, from the vicinity of Jamo Point, looking southeast.**



**Figure 3 Computer-simulated photo of proposed bridge above existing bridge, with distant view of Jamo Point, looking southeast.**

**Table 2.1 Visual Quality Recommendations**

<b>Construction Feature or Activity</b>	<b>Recommendation</b>
Rock Slope Protection (RSP)	Use native rock or rock stain as appropriate, if viewed by boaters or motorists
Vegetation removal	Replant slopes as appropriate
Soil stockpiles	Locate away from viewers as feasible
Access and abandoned roadbeds	Remove, obliterate and replant as appropriate
Pacific Crest Trail	Realign existing trail crossing and replant
Rock outcroppings	Protect in-place with Environmentally Sensitive Area (ESA) fence during construction
Cuts and slope length	Steepen slopes where feasible and round hinge points to blend into existing topography as appropriate
Bridge rail	Consider the aesthetics of the bridge rail and approaches to the bridge in selecting a bridge rail
Retaining walls	Provide a surface treatment if visible from any viewshed
Disturbed soils	Provide temporary and permanent erosion control measures
Relocate utility lines	Minimize visual impacts

## 2.1.5 Cultural Resources

### ***Regulatory Setting***

“Cultural resources” as used in this document refers to historic and archaeological resources. The primary federal laws dealing with historic and archaeological resources include:

The National Historic Preservation Act, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2004, a Section 106 Programmatic Agreement among the Advisory Council, the Federal Highway Administration, the State Historic Preservation Officer, and Caltrans went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement takes the place of the

Advisory Council's regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans.

The Archaeological Resources Protection Act applies when a project may involve archaeological resources located on federal or tribal land. This act requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix B for specific information regarding Section 4(f).

Historical resources are considered under the California Environmental Quality Act, as well as California Public Resources Code Section 5024.1, which established the California Register of Historical Resources. Section 5024 of the Public Resources Code requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

### ***Affected Environment***

An Area of Potential Effects (APE) map was established to outline the project's potential to affect historic properties. The APE delineates the limits of any construction impacts and includes both the existing and proposed right of way and all staging and disposal areas. The APE was delineated in consultation with Caltrans Design staff.

To identify any cultural resources within the project limits, Caltrans sent written communication about the project to the Shasta County historical society. Extensive Native American consultation was conducted, including a request to the Native American Heritage Commission (NAHC) for information about any sacred Native American sites in the project area, as well as a request for Native American contacts. Caltrans sent letters or made phone calls to eight individual tribal members. Field reviews were conducted with Illmawi Band members. A record search was conducted at the Northeast Information Center (NEIC) on August 21, 1999 and updated on March 14, 2005. Caltrans conducted historic property identification efforts in Fall 1999 through Spring 2005 and prepared a Historic Property Survey Report (HPSR), using information from their consultation efforts with local historical

### **Impacts**

The entire Area of Potential Effect (APE) for this undertaking was surveyed for cultural properties. Consistent with the Section 106 Programmatic Agreement, Stipulation VIII.C.1 and Attachment 4, the types of properties identified within the APE are included in the list of property types that are exempt from evaluation. As such, none of the identified properties required formal evaluation and are categorically ineligible for inclusion in the National Register of Historic Places.

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

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

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

## **2.2 Physical Environment**

### **2.2.1 Hazardous Waste Materials**

#### **Regulatory Setting**

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment.

Proper disposal of hazardous material is vital if it is disturbed during project construction.

### ***Affected Environment***

An Initial Site Assessment (November 2000) identified lead based paint on the existing bridge, exposed soil beneath the bridge contaminated by lead sand blast waste, and the possibility of lead in the existing double yellow stripe on SR89 throughout the project area. The report stated that railroad work might involve excavation and disposal of materials treated with creosote or wood preservatives, or other hazardous waste materials. The project area is not listed on the April 1998 List of Hazardous Waste Sites.

### ***Impacts***

A final hazardous waste investigation report (March 2006) revealed no asbestos on the Lake Britton Bridge, but did reveal the presence of lead paint. Because no asbestos was detected in the survey, the Cal/OSHA asbestos standard does not apply for planned demolition activities at the bridge. In addition, demolition debris from the bridge would not be considered as a California hazardous waste based on asbestos content. However, written notification to U.S. EPA Region IX and the California Air Resources Board is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not). Notification instructions are available at the following internet link: <http://www.arb.ca.gov/enf/asbestosform.htm>.

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

All painted surfaces will be treated as lead-containing, subject to future soluble lead testing and disposal at an appropriate facility—a Class I or II landfill. Construction activities that disturb material containing lead are subject to the Cal/OSHA lead standard contained in Title 8, CCR Section 1532.1. Written notification to the nearest Cal/OSHA office is required at least 24 hours prior to certain lead-related work. A project-specific Lead Compliance Plan (CCR Title 8, Section 1532.1) will be prepared to prevent or minimize worker exposure to lead-impacted paint and soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

## 2.2.2 Air Quality

### **Regulatory Setting**

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards. Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM), lead (Pb), and sulfur dioxide (SO<sub>2</sub>).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide, nitrogen dioxide, ozone, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as Shasta County Regional Transportation Planning Agency and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the Regional Transportation Plan is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to meet regional conformity requirements for purposes of the project-level analysis.

Conformity at the project level also requires “hot spot” analysis if an area is in “nonattainment” or “maintenance” for carbon monoxide and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as non-attainment areas, but have recently met the standard, are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as carbon monoxide or particulate matter analysis performed for National Environmental Policy Act and California Environmental Quality Act purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the carbon monoxide standard to be violated, and in “nonattainment” areas, the project must not cause any increase in the number and severity of violations. If a known carbon monoxide or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

### ***Affected Environment***

The project is located in an attainment/unclassified area for all current federal air quality standards. Therefore, conformity requirements do not apply.

This project is exempt from regional (40 Code Federal Regulations 93.127-128) conformity requirements. Separate listing of the project in the Regional Transportation Plan and Transportation Improvement Program, and their regional conformity analyses, is not necessary. The project would not interfere with timely implementation of Transportation Control Measures identified in the applicable State Implementation Plan and regional conformity analysis.

The proposed project is located in Shasta County, which is part of the Shasta County Air Quality Management District (SCAQMD). Shasta County is in attainment or unclassified for all Federal ambient air quality standards. The project is in a state PM<sub>10</sub> non-attainment area.

### ***Impacts***

Construction of the project will result in the generation of suspended particulate matter. The amount of dust generated will be temporary, local, and limited to the areas of construction.

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

To minimize the amount of construction dust generated, dust control practices shall be incorporated into the project in compliance with Caltrans' Standard Specifications and any SCAQMD rules. If asbestos is found, the SCAQMD – Rule 3.22 will be adhered to when handling this material.

Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 7-1/OF "Air Pollution Control" and Section 10 "Dust Control" require the contractor to comply with the Central Valley Air Pollution Control District's rules, ordinances, and regulations.

### **2.2.3 Noise and Vibration**

#### **Regulatory Setting**

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. The intent of these laws is to promote the general welfare and to foster a healthy environment.

For highway transportation projects with Federal Highway Administration involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the criterion for residences (67 decibels) is lower than the criterion for commercial areas (72 decibels). Table 2.2 below lists the noise abatement criteria. Table 2.3 shows the noise levels of typical activities.

**Table 2.2 Activity Categories and Noise Abatement Criteria**

<b>Activity Category</b>	<b>Noise Abatement Criteria, A-weighted Noise Level, Average Decibels Over One Hour</b>	<b>Description of Activities</b>
<b>A</b>	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
<b>B</b>	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
<b>C</b>	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
<b>D</b>	--	Undeveloped lands
<b>E</b>	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: Caltrans Traffic Noise Analysis Manual, 1998

A-weighted decibels are adjusted to approximate the way humans perceive sound

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, October 1998*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12-decibel or more increase) or when the future noise level with the project approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as coming within 1 decibel of the criteria.

If it is determined that the project would have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5-decibel reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and

**Table 2.3 Typical Noise Levels**

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

safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies' input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

The noise element of the Shasta County General Plan contains criteria for the planning and assessment of noise for long-term operations. No noise ordinances currently exist governing construction noise.

### **Affected Environment**

The project area includes scattered residences, McArthur-Burney Falls Memorial State Park, a campground, boat launch, and timberland. The residential area is located near the south end of the project, where the primary noise source is SR89. Farther north, at the State Park, the primary noise sources are the Falls, local traffic in the park, and SR89. At the Dusty Campground approximately 2,300 feet from the existing bridge and around a bend in the lake, SR89 is not easily heard. The primary noise sources here are boating activities and wildlife (and the railroad if it were still operational). Jamo Point Boat Launch is approximately 980 feet, and the Pines Picnic Area approximately 2,065 feet, from the existing bridge. At both locations, the primary noise sources are boating activities, and trucks descending and ascending the existing bridge grade.

### **Impacts**

Caltrans *Noise and Air Report* (April 2005) revealed that traffic noise levels are expected to remain the same with or without the project. Noise produced by construction equipment will occur with varying intensities and duration during the different phases of construction: mobilization, clearing and grubbing, earth work, foundations, base preparation, paving, demolition and clean-up. During Construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. No single location will experience a long-term period of construction noise. Construction noise is regulated by Caltrans Standard Specifications Section 7-1.01I “Sound Control Requirements”. Noise levels generated during construction shall comply with applicable local, state and federal regulations, and all equipment shall be fitted with adequate mufflers according to the manufacturers’ specifications.

### **Avoidance, Minimization, and/or Noise Abatement**

Construction would be temporary, intermittent, ceasing with completion of the construction activity, and conducted in accordance with Caltrans Standard Specifications Section 7-1.01I. No abatement or mitigation is required based on FHWA, NEPA and CEQA guidelines. Measures to minimize the effects of construction noise will be implemented, such as

- Limiting nighttime, holiday and weekend work
- Shielding and locating stationary construction equipment as far away from receptors as feasible, and turning off idling equipment

- Using equipment with sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an un-muffled exhaust
- Placing any maintenance yard, batch plant, haul roads, and other construction operations in locations that minimize noise disturbances
- Informing area residents about the construction work, time involved, and use of control measures to lessen construction impacts

## **2.3 Biological Environment**

Although the scope of the project is large, overall impacts to biological resources are minimal. The new alignment proceeds through relatively common upland habitats. Compensatory mitigation for the loss of these upland habitats will occur through decommissioning of the existing highway and forest stand improvements for the bald eagle and the Northern spotted owl. Potential impacts to rough sculpin will be avoided. This section addresses Wetlands and other Waters, Threatened and Endangered Species, Invasive Species, and temporary construction impacts.

### **2.3.1 Wetlands and Other Waters**

#### ***Regulatory Setting***

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. For an area to be designated as a jurisdictional wetland under the Clean Water Act, hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation) must be present, under normal circumstances.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 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, 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 and the Regional Water Quality Control Boards. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The California Department of Fish and Game's jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act.

### ***Affected Environment***

According to the Natural Environment Study (March 2006), the two main hydrologic features in the project area are Burney Creek (perennial) to the southwest and Lake Britton Reservoir. Burney Creek flows into Lake Britton. A third jurisdictional feature is a seasonal wet meadow/vernal pool within McArthur-Burney Falls Memorial State Park. The existing highway bisects the meadow.

### ***Impacts***

A comprehensive delineation of jurisdictional waters of the U.S. was conducted in 2005. A total of 0.33 acre of ephemeral stream channel will be impacted by project activities. There will be no impact to Burney Creek and no "fill" placed into the creek or within the ordinary high water. The only project activities that will occur in proximity to the creek will be the removal of the existing SR89. This highway removal will benefit Burney Creek by creating a greater riparian and upland buffer

along the creek. This will provide a net benefit to riparian function and will improve water quality.

The only other stream channel in the project area is an unnamed ephemeral channel network on the north side of the lake, just north of the intersection of SR89 and Dusty Campground Road. These channels carry water briefly only during the spring and are dry for most of the year. Riparian function is minimal as most of the vegetation along these channels consists of the predominant upland Oregon oak community. This ephemeral drainage will be buried beneath the fill slope of the new north alignment.

The third jurisdictional feature within the project area is a seasonal wet meadow/ vernal pool within McArthur-Burney Falls State Park. No work will occur on the highway within the wet meadow area. The existing road will be turned over to the state park for management and jurisdiction.

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

Because of the presence of rough sculpin and other special-status aquatic species, water quality protection is an important environmental component. Caltrans will be submitting permit applications to the ACOE (404), DFG (1600), and the RWQCB (401) for all activities that have the potential to impact streams, wetlands, and other jurisdictional features in the project area. All permit requirements and mitigation will be implemented. The project will be constructed in compliance with the following regulations:

- Clean Water Act 404 Permit (ACOE)
- DFG 1600 Permit
- RWQCB 401 Permit
- Porter-Cologne Water Quality Act
- Caltrans Statewide National Pollution Discharge Elimination System (NPDES) Storm Water Permit
- Caltrans Statewide Storm Water Management Plan (SWMP)
- California State Endangered Species Act

## 2.3.2 Threatened and Endangered Species

### **Regulatory Setting**

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanographic and Atmospheric Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 can be a concurrence letter for a *not likely to adversely affect* or a Biological Opinion with an incidental take statement. Section 3 of the Federal Endangered Species Act 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, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act 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 is the agency responsible for implementing the California Endangered Species Act. 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.” The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the California Department of Fish and Game.

### **Affected Environment**

Biological studies for the project began in 1999 and continued until the spring of 2006. Caltrans biologists, university biologists, and private consultants conducted

biological studies. Caltrans staff conducted all Federal Endangered Species Act (Section 7) consultations.

A review of potential *special-status* species and habitats in, or nearby, the project area was conducted utilizing the California Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service Species List (see Appendix F), the CNPS Inventory, the McArthur-Burney Falls Memorial State Park resource inventory, and the Lassen National Forest sensitive species list. These source lists can be found in the appendices of the Natural Environment Study (March 2006), and are summarized in Appendix F of this document.

Of all the potential *special-status* species identified in the above lists, four species—bald eagle, Northern spotted owl, rough sculpin, and osprey—potentially would be affected by project activities. Details about each species can be found below.

Lake Britton is well known for its year-round population of bald eagles. There are eight known eagle nest territories, though not all are used each year. There is only one nest site (South Shore nest site) that is within one mile of the bridge. In addition to the nesting eagles, approximately 5 to 10 migratory eagles utilize the lake during the winter.

The Lake Britton area is considered the extreme southeast range of the Northern spotted owl (*Strix occidentalis caurina*). There is no roosting or nesting habitat within or near the project. Approximately 14 acres of potential Northern spotted owl foraging habitat could be lost with the construction of the new alignment.

The rough sculpin is a Federal Species of Concern and a State Threatened, “Fully Protected” species of fish. California State University, Sacramento staff visually observed “sculpin” in the area of the bridge and presumed these were rough sculpin. The McArthur-Burney Falls Memorial State Park General Plan (1997) states that rough sculpin occurs “upstream of Lake Britton.”

Osprey is a State Species of Special Concern. There are two osprey nest sites in close proximity to the project south of the lake.

### **Impacts**

The main biological resources with the potential to incur project impacts are the bald eagle, rough sculpin, and osprey. These resources will be protected primarily through

avoidance measures. Potential indirect Bald eagle and Northern spotted owl impacts will be mitigated by improving nearby habitat.

Caltrans conducted Federal Endangered Species Act (Section 7) informal consultation with the Sacramento Fish and Wildlife Service regarding potential impacts to eagles. The project *may effect* but is *not likely to adversely affect* bald eagles. On December 2, 2005 Caltrans received a concurrence letter from the USFWS regarding the bald eagle. In addition, the bald eagle is protected under the California State Endangered Species Act, or CESA (Threatened), and is a “Fully Protected Species” under state law. By implementing measures agreed to with DFG, the project is not likely to result in *take* (per CESA).

A biological assessment (BA) for the Northern spotted owl was written (April 2005) and Federal Endangered Species Act (Section 7) consultation was conducted with the Sacramento USFWS office. Caltrans received a concurrence letter from the USFWS dated December 2, 2005. There is no roosting or nesting habitat within or near the project. Approximately 14 acres of potential NSO foraging habitat could be lost with the construction of the new alignment.

Rough sculpin fish potentially could be impacted by the installation of the work trestle piers, pile driving, and general water quality issues. Assuming rough sculpin presence, Caltrans has conducted in-depth consultation with DFG to avoid impacts to rough sculpin. The use of avoidance measures to protect rough sculpin will protect fish in general. Information about other aquatic species can be found in the Natural Environment Study (2006).

Both osprey nest sites are outside of the environmental study limits of the new alignment and neither nest tree will be cut down.

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

The two trees with existing osprey nests will be protected with Environmentally Sensitive Area (ESA) designations and on-the-ground fencing. In addition, all tree removal inside the project area will occur after September 1 and before December 31. This will help avoid disturbance to any nearby nesting osprey.

To prevent any new disturbance to ospreys after they begin nesting, construction activities within the south bank study limits will begin during December and proceed continuously through the osprey nest season. This initial construction presence prior

to the nesting season will allow local osprey to determine whether to nest near the project area or to select other sites away from the construction zone. This will allow osprey to choose sites with construction in progress, rather than have construction commence after they have begun nesting.

To help compensate for the loss of potential nest sites from the new alignment, most of the existing SR89 to the north and west will be decommissioned and revegetated with native plants, including trees. Though the replacement trees will not contribute immediately to nesting habitat, it is anticipated that the highway removal along with the cessation of vehicular traffic will open up a larger forest area adjacent to the lake. The decommissioning will reduce edge effect and habitat fragmentation. Also, because the existing highway is on a steep grade, truck noise from braking, downshifting, and acceleration (uphill) will be greatly reduced. The noise effect to all wildlife, including osprey, is potentially significant and noise reduction will be one of the benefits of this project.

Assuming rough sculpin presence, Caltrans has conducted in-depth consultation with DFG to avoid impacts to rough sculpin, and to protect fish in general.

The following actions will be implemented:

- All aquatic pile driving (percussive) in water, and all pile driving at Piers 2 and 3 out of the water but in proximity to the lake, which could create sound waves harmful to aquatic life, will be incrementally “ramped-up” to full force to allow fish to flee.
- All aquatic pile driving (percussive) in water, and all pile driving at Piers 2 and 3 out of the water but in proximity to the lake, which could create sound waves harmful to aquatic life, will have an aquatic sound attenuation system (also known as a “bubble-curtain”) in place and activated. For pile driving in water, the “bubble-curtain” will completely encircle or encompass the pile-driving operations in both the horizontal and vertical dimensions. For Piers 2 and 3, the “bubble-curtain” will be in place and activated in the water below each pier in a semi-circular fashion from shoreline to shoreline.
- Any drafting of water from the lake will comply with National Oceanic and Atmospheric Administration (NOAA) drafting standards and protocols.
- Because of the aquatic *special-status* species and to protect the beneficial uses of the lake, no construction water will be returned directly into the lake. All water returned to the lake shall comply with effluent requirements established by the Central Valley Regional Water Quality Control Board through issuance

of a Waste Discharge Permit, and the conditions of the 1600 permit issued by the State Department of Fish and Game.

- A qualified fisheries biologist will monitor for fish mortality during pile-driving operations. All in-water (and Pier 2 and 3) pile driving will cease if any rough sculpin are killed, injured, or observed floating on the surface. If observations confirm that each type of pile (“H”, sheet, round) driven with each size of “hammer,” conducted in conjunction with the bubble curtain, does not cause fish kill, then further monitoring may be discontinued. The Caltrans D2 biologist responsible for the project must approve any discontinuation in coordination with the Construction Resident Engineer, after review of the monitoring results.

With the implementation of protection measures for the rough sculpin, it is anticipated that there will be negligible impacts and mortality to non-special status fish in Lake Britton (bass, crappie, trout, sunfish, etc.). Nevertheless, it is possible that differences in physiology and habitat use (e.g., bottom dweller –v. full water column use) may cause differential response to pile-driving. Therefore, it has been determined per DFG consultation that incidental mortality of non-special status fish (e.g., bass, crappie) cannot exceed 50 individuals per day. If this threshold is exceeded, then pile-driving will cease and alternative protocols will be developed through consultation with DFG.

The following avoidance, minimization, and mitigation measures listed below have been agreed to with DFG and the USFWS:

- All tree removal will occur after September 1 and prior to December 30.
- General construction will begin after September 1 and prior to December 30 during the first construction year and continue year-around to preclude potential “post-nesting” impacts to eagles and osprey.
- All percussive pile-driving in-water will occur within a “bubble curtain” and will be “ramped-up” to full force. This will protect fisheries resources and by default eagle food sources.
- Multiple layers of water quality protection measures will be incorporated to all phases of the project to protect fisheries resources and by extension, potential eagle prey.
- To enhance the habitat for bald eagles, Caltrans will provide funding to the Lassen National Forest to implement forest stand thinning at three nearby locations. This thinning will be located in stands that could be used by eagles. The thinning will help prevent catastrophic loss by fire and to accelerate tree structure toward characteristics preferred by eagles for nesting and roosting.

Approximately 10 acres at each site will be “improved” for eagles (30 acres total).

- To enhance the foraging habitat for Northern spotted owl, Caltrans will provide funding to the Lassen National Forest to conduct thinning and improve other forest stand characteristics in designated Northern spotted owl critical habitat. Between 324 to 571 acres of owl habitat will have improvements implemented.

### **2.3.3 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. 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 noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Under the Executive Order, federal agencies cannot authorize, fund, or carry out actions that it believe are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk or harm have been analyzed and considered. This means that Federal-aid and Federal Highway Program funds cannot be used for construction, revegetation, or landscaping activities that purposely include the use of known invasive species.

Determinations of the likelihood of introducing or spreading invasive species and a description of measures being taken to minimize their potential harm should be part of any process conducted to fulfill agency responsibilities under NEPA.

Considerations of invasive species should occur during all phases of the environmental process to fulfill the requirements of NEPA. Until the National Vegetation Management Plan specified in the E.O. is completed, NEPA analyses should rely on each State’s noxious weed list to define the invasive plants that must be addressed and the measures to be implemented to minimize their harm.

### **Affected Environment**

The vegetation of the south bank and alignment consists of Ponderosa pine and mixed conifer series forests, depending on slope and aspect. In general, the forests here consist of mature trees and are relatively open in nature with a sparse under story of shrubs. There appears to be a relatively high density of mature snags south of the lake. Caltrans staff conducted multiple botanical surveys including one specific survey for noxious weeds on June 13, 2005. Particular emphasis was placed on weeds shown on the LNF Noxious Weed and on the State of California Department of Food and Agriculture lists.

Caltrans surveys detected four “C” rated weeds. There were no “A” or “B” rated weeds found during these surveys within the project area. The four noxious weeds found are Klamath weed (*Hypericum perforatum*), yellow star-thistle (*Centaurea solstitialis*), medusahead (*Taeniatherum caput-medusae*), and Scotch broom (*Cytisus scoparius*). Of these four weed species, Klamathweed and yellow star-thistle are widespread throughout northern California and have become “naturalized,” with no eradication within the foreseeable future. Medusahead and Scotch broom, while also relatively common, are not as generally widespread and appear more localized.

Subsequent communication with the Shasta County Department of Food and Agriculture (SCDFA) revealed detection of one tiny isolated population of Squarrose knapweed (*Centaurea squarrosa* [A-rated]) along the Dusty Campground Road and a population of Purple starthistle (*C. calcitrapa* [B-rated]) along SR89 at post mile 28.2. It appears that the SCDFA staff may have already eradicated the knapweed. Locations for both weeds are regularly monitored and treated by the SCDFA.

Almost all weed locations were associated with some type of existing disturbance factor, including the existing highway shoulder or because of the close proximity to local forest or campground dirt roads. This distribution pattern is expected, as the daily movement of hay trucks, horse/livestock trailers, and other vehicles provides the primary source of weed seed. Also, the very nature of roadside maintenance (Caltrans and USFS) creates a perfect environment of bare disturbed soil that is easily and rapidly colonized by weeds.

### **Impacts**

One standard method of weed control is “avoidance” of known sites. Because all the existing weed locations for this project are found along the existing, or on the new

alignment, there is no way to avoid these locations. Treatment (pre-construction, during, and post-construction) of these known locations will be implemented (see mitigation measures below).

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

The following measures will be implemented as part of the total noxious weed control and containment program:

- 1) *Noxious weed surveys will be conducted beginning the year prior to construction and continuing every year during construction, plus one year past construction.*
- 2) *These surveys will cover the entire project impact area, which is larger than the actual project footprint (roughly corresponds to the project Environmental Study Limits).*
- 3) *All weed surveys will be conducted during the late spring and early summer, by qualified botanists.*
- 4) *Prior to the first-year construction, all weed locations within the environmental study limits will be treated.*
- 5) *All populations of weeds will be treated as appropriate.*
- 6) *Each year (including one year post-construction), treatment of any weed areas will be implemented.*
- 7) *All construction equipment will be cleaned of mud, dirt, and plant parts to be free of weed seeds prior to being brought onsite.*
- 8) *Minimize the area used for construction and for staging. This will help keep bare sites as small as possible and lessen weed infestation opportunities.*
- 9) *Mulch (weed-free sources) temporary bare areas if not to be used for several months (e.g., bare “over-wintering” sites).*
- 10) *All erosion control and landscaping/revegetation materials (including mulches) will be certified to be “weed free.”*
- 11) *All gravel and “fill” material shall come from weed-free sources. Because this project will be exporting large amounts of cut material this is not expected to be an issue.*
- 12) *After construction, establish vigorous (and if possible native) desirable plants and mulches to prevent sites available to weed species and to compete with any weeds.*

## **Chapter 3**      **Comments and Coordination**

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Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, and public meetings. This chapter addresses Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

A Value Analysis (VA) study was conducted in April 1999. A Value Analysis is a systematic approach to identify and evaluate alternative solutions to improve the overall value of projects. The VA team identified performance criteria (e.g., operations, access, environmental, maintenance, compliance with standards) and assigned a relative weight to each. Four alternatives were evaluated against each of the criteria and a total performance was developed. The performance of each alternative was then divided by its cost to determine a value index. The team found that the value index of Alternative 1.1 (predecessor to Alternative 1 in this document, and the only remaining build alternative) best met the purpose and need of the project. The VA team also developed alternative ways to improve performance and/or reduce cost.

Agencies contacted during the planning and preparation of this document include:

State Office of Historic Preservation (OHP)  
United States Army Corps of Engineers (ACOE)  
Lassen National Forest  
Native American Heritage Commission  
Pit River Tribe / Illmawi Band  
McArthur-Burney Falls Memorial State Park  
United States Fish and Wildlife Service  
State Department of Fish and Game (DFG)  
City of Burney/Burney Chamber of Commerce  
California Water Resources Control Board

California Department of Boating and Waterways  
Pacific Crest Trail Association  
Volcanic Legacy Scenic Byway-All American Road

In addition to the early coordination with the public agencies, a public open house was held in Burney on July 29, 2004. A notice of this meeting was published in the Record Searchlight on July 21 and 28, 2004 and letters were sent to landowners adjacent to the project location. Caltrans hosted an informational booth at the Intermountain Fair in McArthur in September 2004, at which staff answered questions, displayed videos, and distributed flyers about the project.

There has been continuous coordination with the various regulatory agencies relevant to the project. Discussions with regulatory agencies began in 1999 and continued through 2006. Meetings and information exchanges have been conducted with the California State Parks, Pacific Gas and Electric Company, Lassen National Forest, California Department of Fish and Game, and the U.S. Fish and Wildlife Service.

For the biological evaluation, the main coordination and consultation has been with California Department of Fish and Game, U.S. Fish and Wildlife Service, and the Lassen National Forest. All relevant federal and state endangered species consultations have been appropriately processed. The results of these consultations are shown in the Natural Environment Study (March 2006). Issues and comments received from the Lassen National Forest at a meeting on June 27, 2005 after review of Caltrans' 2005 Draft Natural Environment Study have been incorporated into the final Natural Environment Study (March 2006) and this document.

## **Chapter 4**      **List of Preparers**

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This document was prepared by the following Caltrans North Region staff:

Tom Balkow, Senior Environmental Planner. B.S., Biological Conservation; 14 years environmental planning experience. Contribution: Document support.

Timothy Ellison, Landscape Associate, B.S., Landscape Architecture, CA Landscape Architect #2255; 34 years landscape architectural, planning, design, construction and maintenance experience. Contribution: Visual Impact Assessment consultation, support and coordination with project design.

Thomas J. Graves- R.G./C.E.G (Registered Geologist, Certified Engineering Geologist: Engineering Geologist); 24 years Engineering and Environmental Geology experience. Contribution: Conducted Initial Site Assessment and Site Investigation for Hazardous Waste.

J. Scott Lewis, Engineering Geologist, PG, CEG, RGP. B.S., Ecology, B.A. Geology, M.S. Geophysics, M.S. Geological Engineering; 20 years combined experience in geology, geophysics, and geological engineering. Contribution: Directed and performed roadway portion of geotechnical investigation, assisted in bridge foundation portion of geotechnical investigation.

Aaron McKeon, Associate Environmental Planner. M.R.P., City and Regional Planning; 6 years environmental planning experience. Contribution: Prepared Community Impact Assessment.

Dan McGann, Associate Environmental Planner (Archaeology). B.A., Anthropology and English; 26 years experience in California archaeology. Contribution: Section 106 compliance for the project.

Christine Ottaway, Landscape Associate MLA, MS; 9 years environmental planning experience. Contribution: Wrote Visual Impact Assessment.

Keith Pommerenck, Associate Environmental Planner (Noise). B.S., Environmental Resources; 18 years experience preparing noise reports. Contribution: Noise and Air Quality report.

Ted Schultz, P.E., NPDES Coordinator. B.S., Civil Engineering; 30 years of transportation and facility engineering experience. Contribution: Water Quality Assessment.

Barbara Shields, Associate Environmental Planner. M.A., Geography; 10 years environmental planning experience. Contribution: Initial Study/Environmental Assessment and coordinated the environmental process for the project.

Benjamin Tam, Transportation Engineer. 8 years noise experience/16 years Caltrans experience. Contribution: Technical noise studies.

Daniel Whitley, Associate Environmental Planner (Natural Sciences). B.S., Range Ecology; UC Davis; 19 years as a biologist. Contribution: Conducted FESA and CESA consultations, Natural Environment Study.

## **Appendix A** California Environmental Quality Act Checklist

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The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

Supporting documentation of all California Environmental Quality Act checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2. A summary of mitigation and minimization measures can be found in Appendix D.



Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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**AESTHETICS** - Would the project:

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

**AGRICULTURE 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. 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) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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**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"/>
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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"/>
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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"/>
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d) Expose sensitive receptors to substantial pollutant concentration?

<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"/>
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**BIOLOGICAL RESOURCES** - Would the project:

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

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

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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**COMMUNITY RESOURCES** - Would the project:

a) Cause disruption of orderly planned development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Be inconsistent with a Coastal Zone Management Plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Affect lifestyles or neighborhood character or stability?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Physically divide an established community?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?

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

g) Affect property values or the local tax base?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites, or sacred shrines)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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i) Result in alterations to waterborne, rail, or air traffic?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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j) Support large commercial or residential development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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k) Affect wild or scenic rivers or natural landmarks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**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"/>
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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"/>
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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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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**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 checked="" type="checkbox"/>	<input type="checkbox"/>
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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 checked="" type="checkbox"/>	<input type="checkbox"/>
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ii) Strong seismic ground shaking?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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iii) Seismic-related ground failure, including liquefaction?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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iv) Landslides?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Result in substantial soil erosion or the loss of topsoil?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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**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?

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

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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c) Emit hazardous emissions or handle hazardous or acutely hazardous material, 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"/>
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d) Be located on a site that 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"/>
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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"/>
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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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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**HYDROLOGY AND WATER QUALITY - Would the project:**

a) Violate any water quality standards or waste discharge requirements?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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 that 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"/>
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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 that would result in substantial erosion or siltation on- or offsite?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 that would result in flooding on- or offsite?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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f) Otherwise substantially degrade water quality?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 that 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"/>
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**LAND USE AND PLANNING - Would the project:**

a) 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"/>
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b) 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"/>
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**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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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**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"/>
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b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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**POPULATION AND HOUSING** - Would the project:

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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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"/>
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**PUBLIC SERVICES -**

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

Fire protection?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**RECREATION -**

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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**TRANSPORTATION/TRAFFIC** - Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Exceed, either individually or cumulatively, a level of service standard 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"/>
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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"/>
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d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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**UTILITY 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"/>
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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"/>
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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"/>
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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"/>
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e) Result in determination by the wastewater treatment provider that 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"/>
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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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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**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, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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 checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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c) Does the project have environmental effects that 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"/>
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## **Appendix B** Resources Evaluated Relative to the Requirements of Section 4(f)

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This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection under the U.S. Department of Transportation Act of 1966 either because 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

In 2005, Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy of Users (SAFETEA-LU), Publ. L. 109-59, amended existing Section 4(f) legislation to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This revision provides that once the U.S. Department of Transportation determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete.

Dusty Campground, owned and managed by the USFS, and the Pacific Crest Trail, a national scenic trail that crosses through publicly and privately owned land, are two publicly owned recreational resources within or adjacent to the project area whose proximity impacts would be minor, or *de minimis*, as specified in Section 6009(a) of SAFETEA-LU. The activities, features, and attributes of these resources will remain intact both during and after construction, and impacts would be minimal. Access through the construction site would be provided for users of both of these resources. No further Section 4(f) evaluation is required.



# Appendix C Title VI Policy Statement

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STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

**DEPARTMENT OF TRANSPORTATION**  
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*Flex your power!  
Be energy efficient!*

January 14, 2005

## TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON  
Director

*"Caltrans improves mobility across California"*



## **Appendix D** Minimization and/or Mitigation Summary

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1. The measures below are recommended to minimize construction impacts to local recreational facilities.

- Limit Jamo Point closure, lake access restrictions, and work adjacent to the Dusty Campground road to weekdays. Visitor use levels are highest on weekends, particularly holiday weekends. Implementing this measure would ensure that most visitors to the area are not affected by construction.
- Jamo Point's parking lot is about a half an acre in size, and accommodates 38 vehicles (including vehicles towing boat trailers). During an average weekend, the lot is half empty. On busy weekends, the lot begins to approach capacity. On an average summer weekend, half of the parking lot (0.25 acres) could be used for equipment and material storage without diminishing the supply of parking spaces relative to the demand for them. If the equipment and materials could be moved to another location on holiday weekends, the majority of Jamo Point users would not be affected by project construction. If this equipment cannot be relocated, allowing use of half of the parking lot would still provide a benefit to many users of this facility.
- Advertise the use restrictions of Jamo Point and of water crossings under the SR89 bridge through the California Department of Boating and Waterways, press releases, media outlets, and by mailing information to fishing groups in northern California, southern Oregon, and western Nevada.
- Discuss with PG&E and the U.S. Forest Service amenities that could be added to Jamo Point after the completion of construction to minimize any major project impacts.

2. It is important that the character of the existing mix of mature vegetation and meadow be restored as quickly as possible after the completion of construction. Appropriate temporary erosion and sediment control measures will be implemented to minimize adverse impacts to Lake Britton and adjacent properties at the completion of each construction season with a final permanent treatment upon completion of the project. Because of its nationally recognized uniqueness and eligibility for the California Scenic Highway System, all changes to the roadway must be compatible with the existing status as a Scenic Byway and All American Road.

3. Visual Quality Recommendations:

<b>Construction Feature or Activity</b>	<b>Recommendation</b>
Rock Slope Protection (RSP)	Use native rock or rock stain as appropriate, if viewed by boaters or motorists
Vegetation removal	Replant slopes as appropriate
Soil stockpiles	Locate away from viewers as feasible
Access and abandoned roadbeds	Remove, obliterate and replant as appropriate
Pacific Crest Trail	Realign existing trail crossing and replant
Rock outcroppings	Protect in-place with Environmentally Sensitive Area (ESA) fence during construction
Cuts and slope length	Steepen slopes where feasible and round hinge points to blend into existing topography as appropriate
Bridge rail	Consider the aesthetics of the bridge rail and approaches to the bridge in selecting a bridge rail
Retaining walls	Provide a surface treatment if visible from any viewshed
Disturbed soils	Provide temporary and permanent erosion control measures
Relocate utility lines	Minimize visual impacts

Source: Table 2.1 of this document.

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

5. All painted surfaces will be treated as lead-containing, subject to future soluble lead testing and disposal at an appropriate facility—a Class I or II landfill. Construction activities that disturb material containing lead are subject to the Cal/OSHA lead standard contained in Title 8, CCR Section 1532.1. Written notification to the nearest Cal/OSHA office is required at least 24 hours prior to certain lead-related work. A project-specific Lead Compliance Plan (CCR Title 8, Section 1532.1) will be prepared to prevent or minimize worker exposure to lead-impacted paint and soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

6. To minimize the amount of construction dust generated, dust control practices shall be incorporated into the project in compliance with Caltrans' Standard Specifications and any SCAQMD rules. If asbestos is found, the SCAQMD – Rule 3.22 will be adhered to when handling this material.

7. Measures to minimize the effects of construction noise will be implemented:

- Limiting nighttime, holiday and weekend work
- Shielding and locating stationary construction equipment as far away from receptors as feasible, and turning off idling equipment
- Using equipment with sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an un-muffled exhaust
- Placing any maintenance yard, batch plant, haul roads, and other construction operations in locations that minimize noise disturbances
- Informing area residents about the construction work, time involved, and use of control measures to lessen construction impacts

8. The project will be constructed in compliance with the following regulations:

- Clean Water Act 404 Permit (ACOE)
- DFG 1600 Permit
- RWQCB 401 Permit
- Porter-Cologne Water Quality Act
- Caltrans Statewide National Pollution Discharge Elimination System (NPDES) Storm Water Permit
- Caltrans Statewide Storm Water Management Plan (SWMP)
- California State Endangered Species Act

9. Biological Resources:

The two trees with existing osprey nests will be protected with Environmentally Sensitive Area (ESA) designations and on-the-ground fencing. In addition, all tree removal inside the project area will occur after September 1 and before December 31. This will help avoid disturbance to any nearby nesting osprey.

To prevent any new disturbance to ospreys after they begin nesting, construction activities within the south bank study limits will begin during December and proceed continuously through the osprey nest season. This initial construction presence prior to the nesting season will allow local osprey to determine whether to nest near the project area or to select other sites away from the construction zone. This will allow

osprey to choose sites with construction in progress, rather than have construction commence after they have begun nesting.

To help compensate for the loss of potential nest sites from the new alignment, most of the existing SR89 to the north and west will be decommissioned and revegetated with native plants, including trees. Though the replacement trees will not contribute immediately to nesting habitat, it is anticipated that the highway removal along with the cessation of vehicular traffic will open up a larger forest area adjacent to the lake. The decommissioning will reduce edge effect and habitat fragmentation. Also, because the existing highway is on a steep grade, truck noise from braking, downshifting, and acceleration (uphill) will be greatly reduced. The noise effect to all wildlife, including osprey, is potentially significant and noise reduction will be one of the benefits of this project.

Assuming rough sculpin presence, Caltrans has conducted in-depth consultation with DFG to avoid impacts to rough sculpin, hardhead, Pit roach, and to protect fish in general.

The following actions will be implemented:

- All aquatic pile driving (percussive) in water, and all pile driving at Piers 2 and 3 out of the water but in proximity to the lake, which could create sound waves harmful to aquatic life, will be incrementally “ramped-up” to full force to allow fish to flee.
- All aquatic pile driving (percussive) in water, and all pile driving at Piers 2 and 3 out of the water but in proximity to the lake, which could create sound waves harmful to aquatic life, will have an aquatic sound attenuation system (also known as a “bubble-curtain”) in place and activated. For pile driving in water, the “bubble-curtain” will completely encircle or encompass the pile-driving operations in both the horizontal and vertical dimensions. For Piers 2 and 3, the “bubble-curtain” will be in place and activated in the water below each pier in a semi-circular fashion from shoreline to shoreline.
- Any drafting of water from the lake will comply with National Oceanic and Atmospheric Administration (NOAA) drafting standards and protocols.
- Because of the aquatic *special-status* species and to protect the beneficial uses of the lake, no construction water will be returned directly into the lake. All water returned to the lake shall comply with effluent requirements established by the Central Valley Regional Water Quality Control Board through issuance of a Waste Discharge Permit, and the conditions of the 1600 permit issued by the State Department of Fish and Game.

A qualified fisheries biologist will monitor for fish mortality during pile-driving operations. All in-water (and Pier 2 and 3) pile driving will cease if any rough sculpin are killed, injured, or observed floating on the surface. If observations confirm that each type of pile (“H”, sheet, round) driven with each size of “hammer,” conducted in conjunction with the bubble curtain, does not cause fish kill, then further monitoring may be discontinued. The Caltrans D2 biologist responsible for the project must approve any discontinuation in coordination with the Construction Resident Engineer, after review of the monitoring results.

According to DFG consultation, the incidental mortality of non-special status fish (e.g., bass and crappie) cannot exceed 50 individuals per day. If this threshold is exceeded, then pile-driving will cease and alternative protocols will be developed through consultation with DFG.

The following avoidance, minimization, and mitigation measures listed below have been agreed to with DFG and the USFWS:

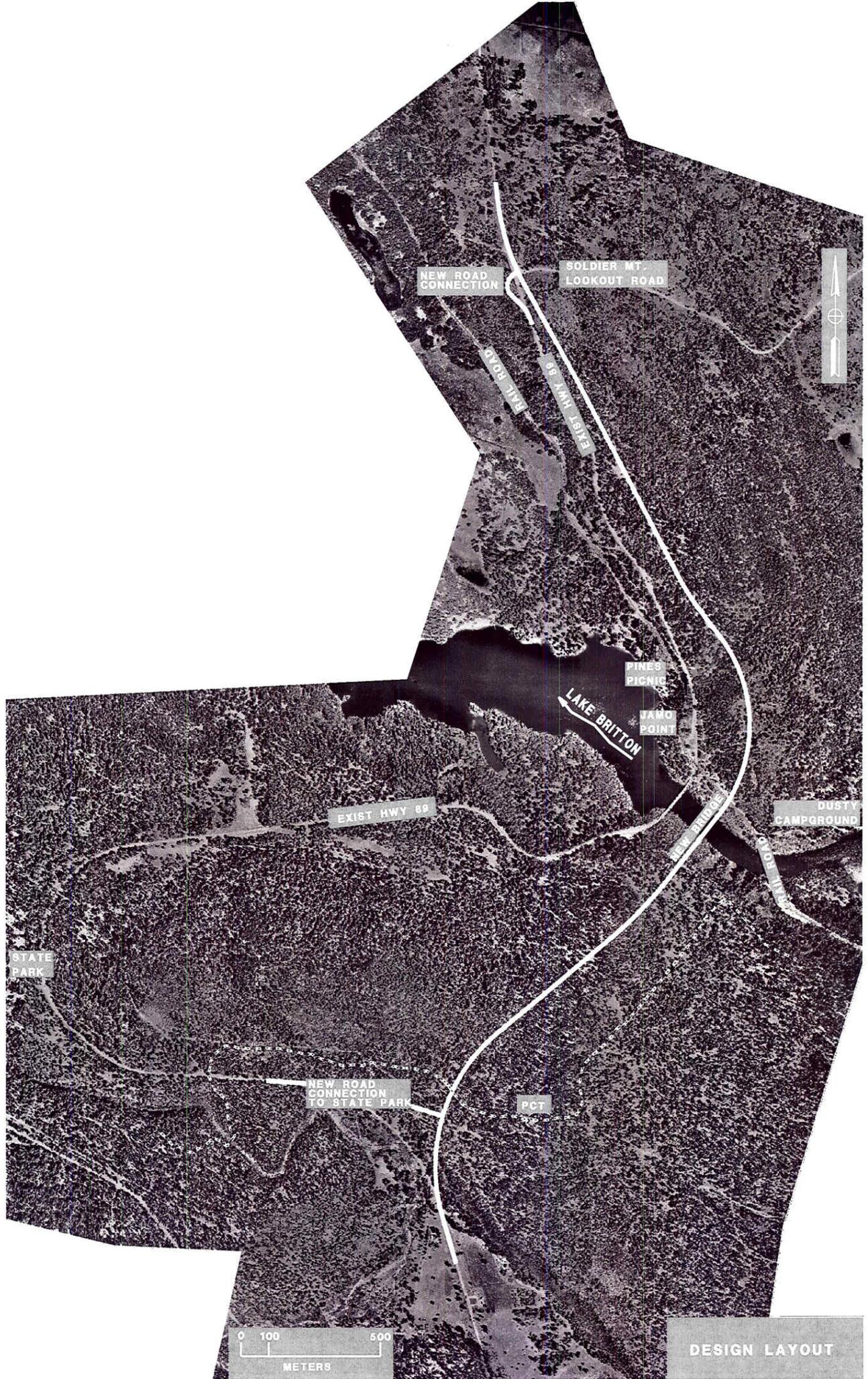
- ❑ All tree removal will occur after September 1 and prior to December 30.
- ❑ General construction will begin after September 1 and prior to December 30 during the first construction year and continue year-around to preclude potential “post-nesting” impacts to eagles and osprey.
- ❑ All percussive pile-driving in-water will occur within a “bubble curtain” and will be “ramped-up” to full force. This will protect fisheries resources and by default eagle food sources.
- ❑ Multiple layers of water quality protection measures will be incorporated to all phases of the project to protect fisheries resources and by extension, potential eagle prey.
- ❑ To enhance the habitat for bald eagles, Caltrans will provide funding to the Lassen National Forest to implement forest stand thinning at three nearby locations. This thinning will be located in stands that could be used by eagles. The thinning will help prevent catastrophic loss by fire and to accelerate tree structure toward characteristics preferred by eagles for nesting and roosting. Approximately 10 acres at each site will be “improved” for eagles (30 acres total).
- ❑ To enhance the foraging habitat for Northern spotted owl impacts associated with the loss of potential foraging habitat, Caltrans will provide funding to the Lassen National Forest to conduct thinning and improve other forest stand characteristics in designated Northern spotted owl critical habitat. Between 324 to 571 acres of owl habitat will have improvements implemented.

The following measures will be implemented as part of the total noxious weed control and containment program:

1. *Noxious weed surveys will be conducted beginning the year prior to construction and continuing every year during construction, plus one year post construction.*
2. *These surveys will cover the entire project impact area, which is larger than the actual project footprint (roughly corresponds to the project Environmental Study Limits).*
3. *All weed surveys will be conducted during the late spring and early summer, by qualified botanists.*
4. *Prior to the first-year construction, all weed locations within the environmental study limits will be treated.*
5. *All populations of weeds will be treated as appropriate.*
6. *Each year (including one year post-construction), treatment of any weed areas will be implemented.*
7. *All construction equipment will be cleaned of mud, dirt, and plant parts to be free of weed seeds prior to being brought onsite.*
8. *Minimize the area used for construction and for staging. This will help keep bare sites as small as possible and lessen weed infestation opportunities.*
9. *Mulch (weed-free sources) temporary bare areas if not to be used for several months (e.g., bare "over-wintering" sites).*
10. *All erosion control and landscaping/revegetation materials (including mulches) will be certified to be "weed free."*
11. *All gravel and "fill" material shall come from weed-free sources. Because this project will be exporting large amounts of cut material this is not expected to be an issue.*
12. *After construction, establish vigorous (and if possible native) desirable plants and mulches to prevent sites available to weed species and to compete with any weeds.*

**Appendix E** Design Layouts for the  
Proposed Project

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NEW ROAD CONNECTION

SOLDIER MT. LOOKOUT ROAD

LAKE BRITTON

EXIST HWY 89

STATE PARK

NEW ROAD CONNECTION TO STATE PARK

PCT

PINES PICNIC

TAMU POINT

DUSTY CAMPGROUND



DESIGN LAYOUT





## Appendix F Special Status Species in Project Area

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A review of potential *special-status* species and habitats in, or nearby, the project area was conducted utilizing the California Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service Species List (included at the end of this appendix), the CNPS Inventory, the McArthur-Burney State Park resource inventory, and the Lassen National Forest sensitive species list. These source lists were evaluated and separated into three categories:

1. Species known in immediate project area.
2. Species known to be near the project area or species with potential habitat in the project impact area.
3. Species not known in or near the project area and with no habitat in the project area.

For the purposes of evaluating potential special-status species, the *project area* encompasses a 10-mile radius surrounding the project.

- *Special-status* species include the following:
- Those listed in the California Fish and Game Code as Rare, Threatened, or Endangered.
- Those listed as Threatened or Endangered (or proposed for listing) under the Federal Endangered Species Act.
- Candidates for state of federal listing.
- *Sensitive* species as listed by the Lassen National Forest.
- *Survey and Manage* species.

The table below shows those species in categories 1 and 2 relevant to the project area. Those species that exist in the project area and those with potential habitat in the project area are indicated. See the Natural Environment Study (2006) for details.

For Category 3 species, if the species is not known from the project area and there is no habitat for the species, it is not included in the table. For example, the Delta smelt is shown on the USFWS Species List. The nearest smelt and its habitat occur near the Sacramento delta. It therefore is not included for further discussion.

For Lassen National Forest *sensitive* species, only the animal species are included in the table below. See the Natural Environment Study (2006) for the LNF *sensitive* plant species (41 species) (Section 6.3), Survey and Manage species (Section 6.1.12),

and the complete CNDDDB and LNF lists, as well as the USFWS Species List that follows the table below.

### Special Status Species in Project Area

Scientific Name	Common Name	Species in Project Area (Y/N/Potential)	Habitat in Project Area (Y/N/Potential)	Comments
<b>Animals</b>				
<i>Accipter gentilis</i>	Northern goshawk	Potential	Potential foraging	Presence of nesting osprey and open forest precludes nesting; negligible effects
<i>Anodonta californiensis</i>	California floater	Yes	Yes	Use of protective measures will avoid potential impacts.
	Bats	Potential	Potential	Use of protective measures will avoid potential impacts.
<i>Buteo swainsoni</i>	Swainson's hawk	N	N	—
<i>Clemmys marmorata marmorata</i>	Northwestern pond turtle	N	Potential	Lack of suitable habitat
<i>Cottus asperimus</i>	Rough sculpin	Potential	Y	Use of protective measures will avoid potential impacts.
<i>Empidonax trailii brewsteri</i>	Willow flycatcher	N	N	Absence of riparian vegetation precludes nesting; negligible effects.
<i>Grus Canadensis tabida</i>	Greater sandhill crane	N	N	—
<i>Gulo gulo luteus</i>	Wolverine	N	N	—
<i>Haliaeetus leucocephalus</i>	Bald eagle	Y	Y	Project may effect but not likely to adversely affect; USFWS concurrence (2005)
<i>Lavinia symmetricus mitrulus</i>	Pit roach	Potential	Potential	Unlikely in the project area; no collection or observation.
<i>Martes Americana</i>	Marten	N	N	—
<i>Martes pennanti</i>	Fisher	N	N	—
<i>Pacifastacus fortis</i>	Shasta crayfish	N	N	Not found during surveys
<i>Rana aurora draytonii</i>	California red-legged frog	N	N	Unsuitable habitat; extirpated; none found during surveys
<i>Rana boylei</i>	Foothill yellow-legged frog	Y	N	Not found in the project area; no

Appendix F Special Status Species in Project Area

Scientific Name	Common Name	Species in Project Area (Y/N/Potential)	Habitat in Project Area (Y/N/Potential)	Comments
				suitable habitat.
<i>Rana cascadae</i>	Cascades frog	N	N	None found during surveys
<i>Rana muscosa</i>	Mountain yellow-legged frog	N	N	None found during surveys
<i>Riparia riparia</i>	Bank swallow	N	Potential	No impacts
<i>Strix occidentalis caurina</i>	Northern spotted owl	Potential	Potential	Loss of about 14 acres of potential foraging habitat; improvement measures will be implemented; project <i>may effect</i> but <i>not likely to adversely affect</i> ; USFWS concurrence (2005).
<i>Strix occidentalis occidentalis</i>	California spotted owl	Potential	Potential	See discussion for N. spotted owl
<i>Strix nebulosa</i>	Great gray owl	N	N	—
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	N	Potential	No effects
<b>Plants</b>				
<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Red Bluff dwarf rush	N	Potential	Not found; no record of detections
<i>Limnanthes floccosa bellingeriana</i>	Bellinger's meadowfoam	Y	Y	No impacts
<i>Orcuttia tenuis</i>	Slender Orcutt grass	N	N	—

Source: Natural Environment Study (March 2006).

**Federal Endangered and Threatened Species that Occur in  
or may be Affected by Projects in the Counties and/or  
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 060110093754  
Database Last Updated: December 23, 2005

**CRITICAL HABITAT:**

On August 11, 2005, the Service published a revised critical habitat designation for vernal pool species. It did not specify critical habitat locations on a species by species basis. If there are species on the list(s) below that were covered under the rule, they are shown because we believe that they are present in the area or may be affected by projects in the area, not because it has specifically been designated as critical habitat for them.

**Quad Lists**

**BURNEY FALLS (679C)**

**Listed Species**

***Invertebrates***

- Branchinecta conservatio* - Conservancy fairy shrimp (E)  
*Branchinecta conservatio* - Critical habitat, Conservancy fairy shrimp (X)  
*Pacifastacus fortis* - Shasta crayfish (E)

***Fish***

- Hypomesus transpacificus* - delta smelt (T)  
*Oncorhynchus mykiss* - Central Valley steelhead (T)

***Amphibians***

- Rana aurora draytonii* - California red-legged frog (T)

***Birds***

- Haliaeetus leucocephalus* - bald eagle (T)  
*Strix occidentalis caurina* - Critical habitat, northern spotted owl (X)  
*Strix occidentalis caurina* - northern spotted owl (T)

**Candidate Species**

***Mammals***

- Martes pennanti* - fisher (C)

**Species of Concern**

***Invertebrates***

- Nebria gebleri siskiyouensis* - Siskiyou ground beetle (SC)  
*Nebria sahlbergii triad* - Trinity Alps ground beetle (SC)

***Fish***

- Cottus asperrimus* - rough sculpin (CA)  
*Lavinia symmetricus mitrulus* - Pit roach (SC)  
*Pogonichthys macrolepidotus* - Sacramento splittail (SC)  
*Spirinchus thaleichthys* - longfin smelt (SC)

***Amphibians***

*Rana cascadae* - Cascades frog (SC)

### Reptiles

*Clemmys marmorata marmorata* - northwestern pond turtle (SC)

### Birds

*Accipiter gentilis* - northern goshawk (SC)

*Agelaius tricolor* - tricolored blackbird (SC)

*Baeolophus inornatus* - oak titmouse (SLC)

*Chaetura vauxi* - Vaux's swift (SC)

*Cinclus mexicanus* - American dipper (SLC)

*Cypseloides niger* - black swift (SC)

*Empidonax traillii brewsteri* - little willow flycatcher (CA)

*Falco peregrinus anatum* - American peregrine falcon (D)

*Melanerpes lewis* - Lewis' woodpecker (SC)

*Numenius americanus* - long-billed curlew (SC)

*Otus flammeolus* - flammulated owl (SC)

*Selasphorus rufus* - rufous hummingbird (SC)

*Strix occidentalis occidentalis* - California spotted owl (SC)

### Mammals

*Corynorhinus (=Plecotus) townsendii pallescens* - pale Townsend's big-eared bat (SC)

*Euderma maculatum* - spotted bat (SC)

*Gulo gulo luteus* - California wolverine (CA)

*Myotis ciliolabrum* - small-footed myotis bat (SC)

*Myotis evotis* - long-eared myotis bat (SC)

*Myotis thysanodes* - fringed myotis bat (SC)

*Myotis volans* - long-legged myotis bat (SC)

*Myotis yumanensis* - Yuma myotis bat (SC)

*Vulpes vulpes necator* - Sierra Nevada red fox (CA)

### Plants

*Juncus leiospermus* var. *leiospermus* - Red Bluff (dwarf) rush (SC)

*Limnanthes floccosa* ssp. *bellingermana* - Bellinger's meadowfoam (SC)

*Mimulus pygmaeus* - Egg Lake monkeyflower (SLC)

## DANA (679D)

### Listed Species

#### Invertebrates

*Branchinecta conservatio* - Conservancy fairy shrimp (E)

*Branchinecta conservatio* - Critical habitat, Conservancy fairy shrimp (X)

*Pacifastacus fortis* - Shasta crayfish (E)

#### Fish

*Hypomesus transpacificus* - delta smelt (T)

*Oncorhynchus mykiss* - Central Valley steelhead (T)

### **Birds**

*Haliaeetus leucocephalus* - bald eagle (T)

*Strix occidentalis caurina* - northern spotted owl (T)

### **Plants**

*Orcuttia tenuis* - Critical habitat, slender Orcutt grass (X)

*Orcuttia tenuis* - slender Orcutt grass (T)

## **Candidate Species**

### **Mammals**

*Martes pennanti* - fisher (C)

## **Species of Concern**

### **Invertebrates**

*Nebria gebleri siskiyouensis* - Siskiyou ground beetle (SC)

*Nebria sahlbergii triad* - Trinity Alps ground beetle (SC)

### **Fish**

*Cottus asperimus* - rough sculpin (CA)

*Lavinia symmetricus mitrulus* - Pit roach (SC)

*Pogonichthys macrolepidotus* - Sacramento splittail (SC)

*Spirinchus thaleichthys* - longfin smelt (SC)

### **Reptiles**

*Clemmys marmorata marmorata* - northwestern pond turtle (SC)

### **Birds**

*Accipiter gentilis* - northern goshawk (SC)

*Agelaius tricolor* - tricolored blackbird (SC)

*Baeolophus inornatus* - oak titmouse (SLC)

*Buteo regalis* - ferruginous hawk (SC)

*Chaetura vauxi* - Vaux's swift (SC)

*Cinclus mexicanus* - American dipper (SLC)

*Cypseloides niger* - black swift (SC)

*Empidonax traillii brewsteri* - little willow flycatcher (CA)

*Falco peregrinus anatum* - American peregrine falcon (D)

*Grus canadensis tabida* - greater sandhill crane (CA)

*Melanerpes lewis* - Lewis' woodpecker (SC)

*Numenius americanus* - long-billed curlew (SC)

*Otus flammeolus* - flammulated owl (SC)

*Riparia riparia* - bank swallow (CA)

*Selasphorus rufus* - rufous hummingbird (SC)

*Strix occidentalis occidentalis* - California spotted owl (SC)

**Mammals**

*Corynorhinus* (=Plecotus) *townsendii pallescens* - pale Townsend's big-eared bat (SC)  
*Euderma maculatum* - spotted bat (SC)  
*Gulo gulo luteus* - California wolverine (CA)  
*Myotis ciliolabrum* - small-footed myotis bat (SC)  
*Myotis evotis* - long-eared myotis bat (SC)  
*Myotis thysanodes* - fringed myotis bat (SC)  
*Myotis volans* - long-legged myotis bat (SC)  
*Myotis yumanensis* - Yuma myotis bat (SC)  
*Vulpes vulpes necator* - Sierra Nevada red fox (CA)

**Plants**

*Iliamna bakeri* - Baker's globe mallow (=Baker's wild hollyhock) (SLC)  
*Limnanthes floccosa ssp. bellingeriana* - Bellinger's meadowfoam (SC)  
*Pogogyne floribunda* - profuse-flowering (=Devil's Garden) pogogyne (SC)

**County Lists**

**No county species lists requested.**

**Key:**

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.  
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.  
(P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.  
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.  
*Critical Habitat* - Area essential to the conservation of a species.  
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.  
(C) *Candidate* - Candidate to become a proposed species.  
(CA) Listed by the State of California but not by the Fish & Wildlife Service.  
(D) *Delisted* - Species will be monitored for 5 years.  
(SC) *Species of Concern*/(SLC) *Species of Local Concern* - Other species of concern to the Sacramento Fish & Wildlife Office.  
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.  
(X) *Critical Habitat* designated for this species

**Important Information About Your Species List**

**Federal Endangered and Threatened Species that Occur in  
or may be Affected by Projects in the Counties and/or  
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 060110093929  
Database Last Updated: December 23, 2005

**CRITICAL HABITAT:**

On August 11, 2005, the Service published a revised critical habitat designation for vernal pool species. It did not specify critical habitat locations on a species by species basis. If there are species on the list(s) below that were covered under the rule, they are shown because we believe that they are present in the area or may be affected by projects in the area, not because it has specifically been designated as critical habitat for them.

**Quad Lists**

**CASSEL (662A)**

**Listed Species**

***Invertebrates***

*Pacifastacus fortis* - Shasta crayfish (E)

***Fish***

*Hypomesus transpacificus* - delta smelt (T)

*Oncorhynchus mykiss* - Central Valley steelhead (T)

***Amphibians***

*Rana aurora draytonii* - California red-legged frog (T)

***Birds***

*Haliaeetus leucocephalus* - bald eagle (T)

*Strix occidentalis caurina* - northern spotted owl (T)

**Candidate Species**

***Mammals***

*Martes pennanti* - fisher (C)

**Species of Concern**

***Fish***

*Cottus asperimus* - rough sculpin (CA)

*Lavinia symmetricus mitrulus* - Pit roach (SC)

*Pogonichthys macrolepidotus* - Sacramento splittail (SC)

*Spirinchus thaleichthys* - longfin smelt (SC)

***Reptiles***

*Clemmys marmorata marmorata* - northwestern pond turtle (SC)

***Birds***

*Accipiter gentilis* - northern goshawk (SC)

*Agelaius tricolor* - tricolored blackbird (SC)

*Baeolophus inornatus* - oak titmouse (SLC)

*Chaetura vauxi* - Vaux's swift (SC)

*Cinclus mexicanus* - American dipper (SLC)  
*Cypseloides niger* - black swift (SC)  
*Empidonax traillii brewsteri* - little willow flycatcher (CA)  
*Falco peregrinus anatum* - American peregrine falcon (D)  
*Melanerpes lewis* - Lewis' woodpecker (SC)  
*Numenius americanus* - long-billed curlew (SC)  
*Otus flammeolus* - flammulated owl (SC)  
*Riparia riparia* - bank swallow (CA)  
*Selasphorus rufus* - rufous hummingbird (SC)  
*Strix occidentalis occidentalis* - California spotted owl (SC)

### **Mammals**

*Corynorhinus (=Plecotus) townsendii pallescens* - pale Townsend's big-eared bat (SC)  
*Euderma maculatum* - spotted bat (SC)  
*Gulo gulo luteus* - California wolverine (CA)  
*Martes americana* - American (=pine) marten (SC)  
*Myotis ciliolabrum* - small-footed myotis bat (SC)  
*Myotis evotis* - long-eared myotis bat (SC)  
*Myotis thysanodes* - fringed myotis bat (SC)  
*Myotis volans* - long-legged myotis bat (SC)  
*Myotis yumanensis* - Yuma myotis bat (SC)  
*Vulpes vulpes necator* - Sierra Nevada red fox (CA)

## **BURNEY (662B)**

### **Listed Species**

#### **Invertebrates**

*Branchinecta conservatio* - Conservancy fairy shrimp (E)  
*Branchinecta conservatio* - Critical habitat, Conservancy fairy shrimp (X)  
*Pacifastacus fortis* - Shasta crayfish (E)

#### **Fish**

*Hypomesus transpacificus* - delta smelt (T)  
*Oncorhynchus mykiss* - Central Valley steelhead (T)

#### **Amphibians**

*Rana aurora draytonii* - California red-legged frog (T)

#### **Birds**

*Haliaeetus leucocephalus* - bald eagle (T)  
*Strix occidentalis caurina* - Critical habitat, northern spotted owl (X)  
*Strix occidentalis caurina* - northern spotted owl (T)

#### **Plants**

*Orcuttia tenuis* - Critical habitat, slender Orcutt grass (X)  
*Orcuttia tenuis* - slender Orcutt grass (T)

## Candidate Species

### Mammals

*Martes pennanti* - fisher (C)

## Species of Concern

### Fish

*Cottus asperrimus* - rough sculpin (CA)

*Lavinia symmetricus mitrulus* - Pit roach (SC)

*Pogonichthys macrolepidotus* - Sacramento splittail (SC)

*Spirinchus thaleichthys* - longfin smelt (SC)

### Reptiles

*Clemmys marmorata marmorata* - northwestern pond turtle (SC)

### Birds

*Accipiter gentilis* - northern goshawk (SC)

*Agelaius tricolor* - tricolored blackbird (SC)

*Baeolophus inornatus* - oak titmouse (SLC)

*Chaetura vauxi* - Vaux's swift (SC)

*Cinclus mexicanus* - American dipper (SLC)

*Cypseloides niger* - black swift (SC)

*Empidonax traillii brewsteri* - little willow flycatcher (CA)

*Falco peregrinus anatum* - American peregrine falcon (D)

*Melanerpes lewis* - Lewis' woodpecker (SC)

*Numenius americanus* - long-billed curlew (SC)

*Otus flammeolus* - flammulated owl (SC)

*Riparia riparia* - bank swallow (CA)

*Selasphorus rufus* - rufous hummingbird (SC)

*Strix occidentalis occidentalis* - California spotted owl (SC)

### Mammals

*Corynorhinus* (=Plecotus) *townsendii pallescens* - pale Townsend's big-eared bat (SC)

*Euderma maculatum* - spotted bat (SC)

*Gulo gulo luteus* - California wolverine (CA)

*Martes americana* - American (=pine) marten (SC)

*Myotis ciliolabrum* - small-footed myotis bat (SC)

*Myotis evotis* - long-eared myotis bat (SC)

*Myotis thysanodes* - fringed myotis bat (SC)

*Myotis volans* - long-legged myotis bat (SC)

*Myotis yumanensis* - Yuma myotis bat (SC)

*Vulpes vulpes necator* - Sierra Nevada red fox (CA)

### Plants

*Calochortus longebarbatus* var. *longebarbatus* - long-haired star-tulip (SC)

*Juncus leiospermus* var. *leiospermus* - Red Bluff (dwarf) rush (SC)

*Pogogyne floribunda* - profuse-flowering (=Devil's Garden) pogogyne (SC)

*Silene occidentalis ssp. longistipitata* - Butte County catchfly (=long-stiped campion) (SC)

## County Lists

**No county species lists requested.**

### Key:

(E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.

*Critical Habitat* - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(CA) Listed by the State of California but not by the Fish & Wildlife Service.

(D) *Delisted* - Species will be monitored for 5 years.

(SC) *Species of Concern*/(SLC) *Species of Local Concern* - Other species of concern to the Sacramento Fish & Wildlife Office.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be



# **Appendix G** Correspondence

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DEPARTMENT OF PARKS AND RECREATION

Northern Buttes District

Cascade Sector

Post Office Box 2430

Shasta, CA 96087

(530) 225-2065

Ruth Coleman, Director

Eric Akana, P.E.  
Project Manager  
Department of Transportation  
P.O. Box 496073  
Redding, CA 96049-6073

April 6, 2004

Dear Mr. Akana:

Included in this letter are additional reasons why the Department of Parks and Recreation supports the Department of Transportation Highway 89 Realignment Plan Alternative 1.1 plan (raising and leveling the new bridge and alignment).

McArthur-Burney Falls Memorial State Park has become a destination for hundreds of thousands visitors each year. The curved alignment of Highway 89 running through the park is very unsafe for park visitors exiting into the park while other vehicles are traveling at highway speeds. Due to how busy the park gets in the summer time, sometimes park traffic backs up onto Highway 89 creating more safety concerns.

Burney Falls has also become a sacred place for the Pit River Native American Tribe. Very near the current alignment of the Highway there are many fragile archeological sites, both historic and pre-historic. These sites include pre-historic bedrock mortars, house pits, burial sites, shell middens, and other very sensitive and fragile sites. There are also numerous historic structures which occurred during the Civilian Conservation Camp period, including camp furniture, and foundations.

The current alignment also borders a wetlands area of the park. This fragile ecosystem is impacted by the current alignment and the natural resources would benefit by the realignment plan.



DEPARTMENT OF PARKS AND RECREATION

Ruth G. Coleman, Acting Director

Cascade Sector,  
Northern Buttes District  
Post Office Box 2430  
Shasta, CA 96087  
(530) 225-2065

Eric Akana, P.E.  
Project Manager  
Department of Transportation  
P.O. Box 496073  
Redding, CA 96049-6073

August 29, 2003

Dear Mr. Akana:

Enclosed is a copy of the Park Core Area Development Plan for McArthur-Burney Falls Memorial State Park. The Core Area Development Plan was developed in 1999 to supplement the park general plan which was completed in 1997. This development plan incorporated the proposed Highway 89 realignment plan.

The Department of Parks and Recreation fully supports the Department of Transportation Alternative 1.1 plan (raising and leveling the new bridge and alignment). The movement of Highway 89 away from the park would provide a huge benefit to the noise level of the park campground and the tranquility of the Burney Falls experience. The park receives over a quarter of a million park visitors a year. Burney Falls has been referred to as the "eighth wonder of the world" and is a National Historic Landmark.

I look forward to supporting this project in the future and hope that Alternative 1.1 goes forward towards completion. This alternative not only would improve the safety of Highway 89, but could also become a lasting legacy to protecting the serenity of Burney Falls for many future generations.

Sincerely,

Michael E. Gross  
Superintendent  
Cascade Sector





# Pacific Crest Trail Association

5325 Elkhorn Blvd., PMB #256, Sacramento, CA 95842-2526  
(916)-349-2109\*Fax:(916)-349-1268  
www.pcta.org

JUL 31 2000

July 26, 2000

Barbara Lauger  
Assoc. Environ. Planner  
CalTrans  
District 2  
PO Box 496073  
Redding, CA 96049

Dear Barbara:

Thanks for the call about possible highway changes near McArthur-Burney Falls State Park. As I mentioned on the phone, the realignment idea seems to have a great deal of merit since it would move the highway well away from the campground. This could have a dramatic impact on noise levels in the park.

The PCT to the east of the current road, is located on private forest land, for the most part, via a 20' wide easement. The terrain is quite gentle so, landowners willing, it could be realigned if need be.

The two key thoughts that come to mind with any highway change are the need for an underpass for year-round recreation use (hikers and equestrians, snowshoers and ski tourers) and a good trailhead facility. The latter should have space for horse trailers and cars, along with an interpretive display about this most amazing National Scenic Trail and perhaps toilet facilities.

Enclosed is some information about the PCT and PCTA, including text from the guidebook. After I get more details from you, we may have some additional questions and suggestions.

Sincerely,

A handwritten signature in cursive script that reads "Reuben Rajala".

Reuben Rajala  
Trails Program Director  
Phone (Direct): 916-349-0941  
E-mail: trails@pcta.org





# Appendix H All-American Road Designation

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## State Route 89 Adjacent to Burney Falls State Park is part of this “All American Road”

Source: *Federal Highway Administration*

### National Scenic Byway

A National Scenic Byway is a road recognized by the United States Department of Transportation for its archeological, cultural, historic, natural, recreational, and/or scenic qualities. The program was established by Congress in 1991 to preserve and protect the nation's scenic but often less-traveled roads and promote tourism and economic development. The most scenic of the roads in the program are designated All-American Roads. The designation means they have features that do not exist elsewhere in the United States and are scenic enough to be tourist destinations unto themselves. The program is administered by the Federal Highway Administration.

[http://www.contextsensitivesolutions.org/content/reading/byways\\_design/](http://www.contextsensitivesolutions.org/content/reading/byways_design/)

Please Refer to: [Scenic Byways: A Design Guide for Roadside Improvements](#)

### Fourteen Components for the Corridor Management Plan (Volcanic Scenic Legacy)

- 1) A map identifying the corridor boundaries and the location of intrinsic qualities and different land uses within the corridor.
- 2) An assessment of such intrinsic qualities and of their context.
- 3) A strategy for maintaining and enhancing those intrinsic qualities. The level of protection for different parts of a National Scenic Byway or All-American Road can vary, with the highest level of protection afforded those parts which most reflect their intrinsic values. All nationally recognized scenic byways should, however, be maintained with particularly high standards, not only for travelers' safety and comfort, but also for preserving the highest levels of visual integrity and attractiveness.
- 4) A schedule and a listing of all agency, group, and individual responsibilities in the implementation of the corridor management plan, and a description of enforcement and review mechanisms, including a schedule for the continuing review of how well those responsibilities are being met.
- 5) A strategy describing how existing development might be enhanced and new development might be accommodated while still preserving the intrinsic qualities of the corridor. This can be done through design review, and such land management techniques as zoning, easement, and economic incentives.
- 6) A plan to assume ongoing public participation in the implementation of corridor management objectives.
- 7) A general review of the roads or highway's safety and accident record to identify any correctable faults in highway design, maintenance, or operation.
- 8) A plan to accommodate commerce while maintaining a safe and efficient level of highway service, including convenient user facilities.
- 9) A demonstration that intrusions on the visitor experience have been minimized to the extent feasible, and a plan for making improvements to enhance that experience.
- 10) A demonstration of compliance with all existing local, State, and Federal laws on the control of outdoor advertising.
- 11) A signage plan that demonstrates how the State will insure and make the number and placement of signs more supportive of the visitor experience.

- 12) A narrative describing how the National Scenic Byway will be positioned for marketing.
- 13) A discussion of design standards relating to any proposed modifications of the roadway. This discussion should include an evaluation of how the proposed changes may affect on the intrinsic qualities of the byway.
- 14) A description of plans to interpret the significant resources of the scenic byway.

LINKS:

<http://www.volcaniclegacybyway.org/>

<http://www.byways.org/browse/byways/2297/overview.html>

<http://www.volcaniclegacy.net/>

<http://www.fs.fed.us/r5/modoc/recreation/modocscenicbyway.shtml>

<http://www.klamathcounty.net/volcaniclegacy.html>

<http://www.shastacascade.org/forest/nfsdr.htm>

[http://www.milebymile.com/main/United\\_States/Oregon/byway/Volcanic\\_Legacy\\_Scenic\\_Byway.html](http://www.milebymile.com/main/United_States/Oregon/byway/Volcanic_Legacy_Scenic_Byway.html)

<http://www.alturaschamber.org/scenic-byways.htm>

[http://www.trails.com/tcatalog\\_trail.asp?trailid=XFA102-017](http://www.trails.com/tcatalog_trail.asp?trailid=XFA102-017)

**Appendix I** United States Forest Service  
Fire Plan

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**FIRE PLAN FOR CONSTRUCTION AND SERVICE CONTRACTS**

4-19-2005

(Ref: FSH 6309.32 and 6309.11)

**1. SCOPE:**

The provisions set forth below outline the responsibility for fire prevention and suppression activities and establish a suppression plan for fires within the contract area. The contract area is delineated by map in the contract. The provisions set forth below also specify conditions under which contract activities will be curtailed or shut down.

**2. RESPONSIBILITIES:**

**A. Contractor**

(1) Shall abide by the requirements of this Fire Plan.

(2) Shall take all steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in completion of the contract, shall be responsible for preventing the escape of fires set directly or indirectly as a result of contract operations, and shall extinguish all such fires which may escape.

(3) Shall complete the Contractor's Plan Regarding Personnel and shall furnish the Contracting Officer (CO) with a copy prior to commencing work at the site. Shall currently advise the CO of any changes in personnel as the changes occur. Shall revise Section 6.B to reflect current activities upon request of the CO.

**B. Forest Service**

The Forest Service may conduct one or more inspections for compliance with the fire plan. The number, timing, and scope of such inspections will be at the discretion of agency employees responsible for contract administration. Such inspections do not relieve the Contractor of responsibility for correcting violations of the fire plan or for fire safety in general, as outlined in paragraph 2.A above.

**3. TOOLS AND EQUIPMENT:**

**A. The Contractor shall comply with the following requirements during the fire precautionary period as defined by unit administering contracts unless waived in writing:**

The Fire Precautionary Period is \_\_\_\_\_ to \_\_\_\_\_.

Shall equip all diesel and/or gasoline-operated engines, both stationary and mobile, and all flues used in any contract and camp operations with spark arresters that meet Forest Service standards set forth in the National Wildfire Coordinating Group publication for Multiposition Small Engines, #430-1, or General Purpose and Locomotive, #430-2. Spark arresters are not required on equipment powered by exhaust-driven turbo-charged engines or motor vehicles equipped with a maintained muffler as defined in California Public Resources Code (CPRC), Section 4442 and 4443.

Shall furnish and have available for emergency use on each piece of equipment used in conjunction with performance of the work as listed below, hand tools and/or equipment as follows (CPRC 4427, 4428 and 4431):

(1) One shovel, one axe (or pulaski) and a fully charged fire extinguisher U.L. rated at 2-A:10-B:C, or larger, on each truck, personnel vehicle, tractor, grader and other heavy equipment. Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, stroke delimeter, etc), except tractors and skidders, with at least two 4A:80-B:C fire extinguishers, or equivalent. In addition, concentrations of wood dust and debris shall be removed from such equipment daily.

(2) One shovel and one backpack 5 gallon water-filled tank with pump with each welder.

(3) One shovel and one pressurized chemical fire extinguisher for each gasoline-powered tool, including but not restricted to chain saws, soil augers, rock drills, etc. Fire extinguishers shall be of the type and size set forth in the California Public Resources Code Section 4431. Shovel must be kept within 100 feet from each chain saw when used off cleared landing areas.

(4) The Contractor is ( ) is not ( ) required to furnish a sealed box of fire fighting tools, to be located in the operating area, at a point accessible in the event of fire. This box shall contain:

- o \_\_\_\_\_ 5-gallon, backpack pump-type fire extinguisher filled with water;
- o \_\_\_\_\_ axes;
- o \_\_\_\_\_ McCleod fire tools;
- o \_\_\_\_\_ serviceable chain saw of three and one-half or more horsepower with a cutting bar 20 inches in length or longer;
- o \_\_\_\_\_ shovels so that each employee at the operation can be equipped to fight fire.

The box shall remain unlocked, but be sealed with a Forest Service seal to be broken for emergency use only.

All tools and equipment required above shall be in good workable condition and shall meet the following Forest Service requirements for fire tools:

(a) Shovels shall be size "O" or larger and be not less than 46 inches in overall length.

(b) Axes (or pulaskis) shall have 2-1/2 pound or larger heads and be not less than 28 inches in overall length.

The Contractor is ( ) is not ( ) required to furnish a water tank truck or trailer on or in proximity to the contract area during the Fire Precautionary Period and meet the following minimum specifications: contain at least 300 gallons of water; a combination straight stream-fog nozzle with 300 feet of one-inch fire hose, with no segment longer than 50 feet; fire hose with nozzle closed shall be capable of withstanding 200 psi pump pressure without leaking, slipping of couplings, distortions, or other failures; nozzle discharge rating of six to 20 gallons per minute; a pump capable of delivering 23 gallons per minute at 175 pounds psi at sea level; power unit for pump shall have fuel for at least two hours operation, with ample transport available for immediate and safe movement of tank over roads serving the contract area; and shall be in good working order; pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread.

Shall furnish two tractor headlights for each tractor dozer, tractor headlights shall be attachable to each tractor and served by an adequate power source

B Any additional fire plan requirements:

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4. **GENERAL**

A. **State Law.** The Contractor shall comply with all applicable laws of the State of California. In particular, see California Public Resource Codes.

B. **Permits Required.** The Contractor must secure a special written permit from the District Ranger or designated representative before engaging in any of the activities listed below. The terms and conditions of any of the permits required for this contract are as shown on copies attached to the Fire Plan.

(1) **Blasting and Storage of Explosives and Detonators.** (Explosives Permit required by California Health & Safety Code, Section 12101.)

(2) **Burning.**

(3) **Air Pollution.** (Issued by local State or County Air Pollution Control Districts, as applicable.)

(4) Camp, Lunch and Warming Fires.

(5) Welding and Cutting.

- C. **Regulations for Burning.** Before setting any fires whatsoever, the Contractor shall notify the CO of his/her intentions. Special care shall be taken to prevent scorching or causing any damage to adjacent structures, trees, and shrubbery. Piles of material to be burned shall be of such size and so placed that during burning no damage shall result to adjacent objects.
- D. **Smoking and Fire Rules.** Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter (CPRC 4423.4). In areas closed to smoking, the CO may approve special areas to be used for smoking. The Contractor shall sign designated smoking areas. Contractor shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Contractor's supervisory personnel shall require compliance with these rules. Under no circumstances shall smoking be permitted during fire season while employees are operating light or heavy equipment, or walking or working in grass and woodlands.
- E. **Storage and Parking Areas.** Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 10 feet unless otherwise specified by local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine. The COR shall approve such sites in writing.
- F. **Welding.** Contractor shall confine welding activity to cleared areas having a minimum radius of ten feet measured from place of welding.
- G. **Blasting.** Contractor shall use electric caps only. When blasting is necessary in slash areas, a watchperson equipped with shovel and a water-filled backpack can (5 gallon), with hand pump, shall remain in the immediate area for an hour after blasting has been completed.
- H. **Oil Filter and Glass Jugs.** Contractor shall remove from National Forest land all oily rags and used oil filters. Contractor shall prohibit use of glass bottles and jugs on contract operations.
- I. **Reporting Fires.** As soon as feasible, after initial control action is taken, within 1 hr, the contractor shall notify Forest Service of any fires along roads or project area within designated contract.
- J. **Communications.** Contractor shall furnish an agreed upon communication system connecting each operation with the designated Forest Service Dispatch Center. The communications system shall be capable of contacting the designated Forest Service Dispatch Center within five (5) minutes of discovery of a fire in the Contractor's operating area. The communications system shall be operable during the Contractor's operation in the fire precautionary period.
- K. **Fire Patrol Person.** When required, the sole responsibility of the patrol person shall be to patrol the operation for prevention and detection of fires and to take suppression action where necessary. By agreement, one patrol person may provide patrol on this and adjacent projects.

## 5. EMERGENCY MEASURES

The table set forth below establishes work restrictions and fire precautions that the Contractor must observe at each activity level. The restrictions are cumulative at each level.

Contractor shall conform to the limitations or requirements of Project Activity Level (PAL) obtained from Forest Service before starting work each day. If practicable, Forest Service will determine the following day's activity level by 4:00 PM each afternoon. The Contractor can obtain the PAL for the following day by calling, after 4:00 PM, the following phone number \_\_\_\_\_. Activity level may be changed at any time if, in the judgment of the Forest Service, fire danger is higher or lower than predicted and such change is consistent with forest management objectives. The decision to change the activity level, and when, and how to take weather observations for that purpose, are within the discretion of Forest Service.

**PROJECT ACTIVITY LEVELS**

**Contractor & Forest Service may agree to a variance for operations at levels, B, C, D & Ev.**

<b>Level</b>	<b>Project Activity Requirements</b>	<b>Additional Project Activity Requirements Using Hotsaw Technology (generally rotary heads operating at &gt;1100 rpm)</b>
<b>A</b>	Minimum required by Section 3	Same as Project Activity Requirements
<b>B</b>	<ol style="list-style-type: none"> <li>1. Furnish fire patrolperson. A fire patrolperson is required for mechanical operations from cessation of operations until 2 hours after operations cease or sunset, which ever occurs first</li> <li>2. Tank truck or trailer shall be on or adjacent to landing (Section 3).</li> </ol>	Same as Project Activity Requirements.
<b>C</b>	<ol style="list-style-type: none"> <li>1. Fire patrolperson is required until sunset local time.</li> <li>2. The following operations are prohibited from 1:00 PM until 8:00 PM local time:                             <ol style="list-style-type: none"> <li>a. Blasting</li> </ol> </li> </ol>	<p>Operations are prohibited between 1:00 PM and sunset local time. Operations may continue if they meet the following requirements:</p> <ol style="list-style-type: none"> <li>1. A fire patrolperson is required for each piece of equipment until sunset local time.</li> <li>2. Provide periodic (once per hour) inspection of areas treated that day.</li> <li>3. Provide on-board self extinguishing fire suppression system on each piece of equipment capable of extinguishing any equipment related fire or provide a portable Class A fire suppression system capable of extinguishing a 20 foot by 20 foot wildland fire within five minutes of discovery. 1/</li> </ol>
<b>D</b>	<p>All following activities may operate:</p> <ol style="list-style-type: none"> <li>1. Rubber tired skidding</li> <li>2. Chipping on roads or landings</li> <li>3. Cable yarding</li> <li>4. Loading of logs decked at landings</li> <li>5. Welding or cutting of metal only by special permit</li> <li>6. Road maintenance</li> <li>7. Culvert installation</li> <li>8. Dirt moving</li> <li>9. Helicopter Yarding</li> <li>10. Hand slash disposal</li> <li>11. Chainsaw operations on landings and roadbeds</li> </ol> <p>All other operations may continue after 1:00 PM local time, if they meet the following requirements:</p> <p>A fire patrolperson is required to walk all areas treated that day once per hour, until sunset local time. This includes chainsaw felling, metal track skidding, machines with chainsaw cutting heads and mastication equipment.</p>	Same requirements as listed in PAL C:

Ev	<p>All following activities may operate:</p> <ol style="list-style-type: none"> <li>1. Hauling and loading of logs decked at landings</li> <li>2. Equipment at approved sites may be serviced.</li> <li>3. Roads: Dust abatement or rock aggregate installation (does not include pit development)</li> <li>4. Chainsaw operation associated with loading</li> </ol> <p>All other operations may continue until 1:00 PM local time when Contractor and Forest Service agree to variance.</p>	<p>Operations are prohibited, except variances are permitted for operations until 1:00 PM local time when Contractor and Forest Service agree to additional precautions.</p> <p>Minimum requirements: At this level, the following types of equipment shall be immediately available within one quarter mile of the activity to quickly reach and effectively attack a fire start: tractors, skidders or other equipment with a blade capable of constructing fireline, plus PAL level D requirements.</p>
E	<p>The following activities may operate:</p> <ol style="list-style-type: none"> <li>1. Hauling and loading of logs decked at landings</li> <li>2. Equipment at approved sites may be service.</li> <li>3. Roads: dust abatement or rock aggregate installation (does not include pit development)</li> <li>4. Chainsaw operation associated with loading</li> </ol>	Operations are prohibited

1/ Suppression system equipment minimum requirements: 100 feet of one inch hose, minimum discharge distance of 50 feet, minimum pressure 100 PSI at discharge orifice, and sustainable for a minimum of 5 minutes.

**6. REPORTING ALL WILD FIRES**

A. Contractor's employees shall report all fires to any of the following Forest Service facilities and/or personnel listed below, but not necessarily in the order shown:

	Name	Office Address and/or telephone	Home address and/or telephone
<b>Dispatch Center</b>			
Nearest FS Station			
Inspector			
COR			
District Ranger			
D.R. Designated Rep			

When reporting a fire, provide the following information;

- Your Name;
- Call back telephone number;
- Project name;
- Location;
  - Legal description (Township, Range, Section); and
  - Descriptive location (Reference point);
- Fire Information;
  - Acres;
  - Rate of Spread; and
  - Wind Conditions.

B. Contractor's Plan Regarding Personnel. The Contractor shall, prior to commencing work, furnish the following information relating to key personnel

Title	Name	Address and/or telephone
<b>Fire Patrolperson</b>		