

DEAD HORSE SUMMIT CURVE REALIGNMENT

Siskiyou County, California

SIS-89-PM 3.0/4.0

02-1C3700

INITIAL STUDY (CEQA)



Prepared by the
State of California Department of Transportation

AUGUST 2006



**INITIAL STUDY
(CEQA)**

In Siskiyou County, California
(Curve Realignment Project)
Highway 89

02-SIS-089-PM 3.0/4.0
02-1C3700

AUGUST 2006

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT?

This document is an Initial Study (IS) which examines the potential impacts of the proposed project located in Siskiyou County, California. The document describes why the project is being proposed, how the project may affect the existing environment and mitigation to reduce or eliminate environmental impacts.

What should you do?

- Please read this Initial Study
- We welcome your comments. If you have any concerns regarding the proposed project, please submit comments via regular mail to Caltrans, Attn: Tom Balkow, Chief, Office of Environmental Management, 1657 Riverside Dr. Redding, CA 96001; submit comments via email to thomas_balkow@dot.ca.gov
- Submit comments by the deadline September 30, 2006.

What happens after this?

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

Department of Transportation
Attn: Equal Opportunity Office
1657 Riverside, Redding, CA 96001
(530) 225-3425 Voice, or (530) 225-2019 TTY

Realign curve in a 1-mile section of State Route 89, within Siskiyou County

INITIAL STUDY (CEQA)

Submitted pursuant to: Division 13 Public Resources Code

THE STATE OF CALIFORNIA - Department of Transportation

8.21.06

Date of Approval



LENA R. ASHLEY, Chief North Region
Environmental Services, North
California Department of Transportation

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The purpose of this Project is to reduce fatal and injury accidents along State Route 89 in Siskiyou County between Post Miles (PM) 3.0 and 4.0 by improving the highway alignment and geometrics near Dead Horse Summit. Most accidents at this location occurred during icy and snowy conditions.

The project proposes to modify two horizontal curve radii (1,300' at one location and 4,500' at the other), widen shoulders to 8 feet, develop a clear recovery zone, increase sun exposure to the highway, and elevate the highway to reduce the possibility of icing during the winter. The project area falls within the Dead Horse Summit 7½-minute Quadrangle, T39N, R2E, Sections 19 and 20.

It is anticipated that all culverts listed below will be extended. If capacity problems are unearthed during the operations, those culverts will be replaced. Culvert work will be as follows (east to west):

Culvert Post Mile	Proposed Work
3.16	Replace culvert
3.22	Extend culvert
3.46	Extend culvert
3.63	Add culvert across new alignment

Staging will occur within the old roadbed as the new road is being built. No offsite disposal sites will be necessary for this project. All disposal material will be used on site for the build up of the new road elevation. A temporary detour will be constructed to route traffic from the old roadway segment to the new roadway segment where the two segments cross.

The focus of this study will be the loss of wetland and riparian habitat, as well as, the potential loss of Northern Spotted Owl (NSO) habitat associated with required vegetation removal (a maximum of 37 ft. on both sides of the existing highway) to accommodate the realignment. The preferred alternative is summarized as follows:

Preferred Alternative: This alternative proposes to improve highway geometrics by modifying the radii of State Route 89 curves near Dead Horse Summit to 1,300' and 4,500' feet respectively and by lowering the crest and raising the sag in the alignment at a serious dip location within the project limits. This alternative will produce a smoother alignment, and will require wetland mitigation.

The programmed cost for this project is \$3.5 million and construction should take place during the summer of 2008.

Determination

An Initial Study has been prepared by the California Department of Transportation, District 2. On the basis of this study it is determined that the proposed action with the incorporation of the identified mitigation measures will not have a significant effect on the environment for the following reasons:

- The project will mitigate for the loss of wetland and NSO habitat using a prescribed replacement compensation ratio and thereby perpetuating the habitat on-site, or at an identified off-site location. The project will not have an effect on air quality, agriculture, mineral resources, geologic and seismic hazards and energy resources.
- The project will not have a significant effect on historical resources, water quality, vegetation, floodplains, soil erosion, noise, a Wild and Scenic River and scenic resources.

Brian F. Crane
District Director
District 2
California Department of Transportation

Date

Summary

The purpose of this Project is to reduce fatal and injury accidents along SR 89 in Siskiyou County between Post Miles (PM) 3.0 and 4.0 by improving the highway alignment and geometrics near Dead Horse Summit. Most accidents at this location occurred during icy and snowy conditions.

The project proposes to modify two horizontal curve radii (1,300' at one location and 4,500' at the other), widen shoulders to 8 feet, develop a clear recovery zone, increase sun exposure to the highway, and elevate the highway to reduce the possibility of icing during the winter. The project area falls within the Dead Horse Summit 7½-minute Quadrangle, T39N, R2E, Sections 19 and 20.

It is anticipated that all culverts listed below will be extended. If capacity problems are unearthed during the operations, those culverts will be replaced. Culvert work will be as follows (east to west):

Culvert Post Mile	Proposed Work
3.16	Replace culvert
3.22	Extend culvert
3.46	Extend culvert
3.63	Add culvert across new alignment

Staging will occur within the old roadbed as the new road is being built. No offsite disposal sites will be necessary for this project. All disposal material will be used on site for the build up of the new road elevation. A temporary detour will be constructed to route traffic from the old roadway segment to the new roadway segment where the two segments cross.

The focus of this study will be the loss of wetland and riparian habitat, as well as, the loss of potential Northern Spotted Owl (NSO) habitat associated with required vegetation removal (a maximum of 37 ft. on both sides of the existing highway) to accommodate the realignment. The preferred alternative is summarized as follows:

Preferred Alternative: This alternative proposes to improve highway geometrics by modifying the radii of State Route 89 curves near Dead Horse Summit to 1,300' and 4,500' feet respectively and by lowering the crest and raising the sag in the alignment at a serious dip location within the project limits. This alternative produces the smoothest alignment, however, it will require wetland mitigation.

The programmed cost for this project is \$3.5 million and construction should take place during the summer of 2008.

Caltrans has prepared an Focused Initial Study, and determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The project will mitigate for the loss of wetland and NSO habitat using a prescribed replacement compensation ratio and thereby perpetuating the habitat on-site, or at an identified off-site location. The project will not have an effect on air quality, agriculture, mineral resources, geologic and seismic hazards and energy resources.
- The project will not have a significant effect on historical resources, water quality, vegetation, floodplains, soil erosion, noise, a Wild and Scenic River and scenic resources.

This Initial Study focuses on mitigation for wetland/riparian and Northern Spotted Owl habitat take.

Permits and Coordination

The following permits will need to be obtained for this project: 1602 Department of Fish and Game Streambed Alteration Agreement; 401 Regional Water Quality Control Board Clean Water Certification; and a 404 Army Corps of Engineers Nationwide Permit. Biological and right-of-way coordination will be required with the United States Fish and Wildlife Service and the United States Forest Service respectively.

Table of Contents

CHAPTER 1	PURPOSE AND NEED	12
1.1	Project Purpose	12
1.2	Project Need	12
1.3	Project Background	12
CHAPTER 2	PROJECT ALTERNATIVES	13
2.1	Alternative Development Process	13
2.1.1	Planning	13
2.1.1.1	Regional and System Planning	13
2.1.1.2	State Planning	13
2.1.1.3	Regional Planning	13
2.1.1.4	Local Planning	13
2.1.1.5	Transit Operator Planning	13
2.1.1.6	Current and Forecasted Traffic	14
2.2	Project Alternatives	14
2.2.1	No Build Alternative	14
2.2.2	Build Alternative (Preferred – Alternative A)	14
2.3	Alternatives Considered and Withdrawn	14
2.3.1	Alternative B	14
2.3.2	Alternative C	15
CHAPTER 3	AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES	16
3.1	Biological Environment	16
3.1.1	Wetlands and Other Waters	16
3.1.1.1	Regulatory Setting	16
3.1.1.2	Affected Environment	17
3.1.1.3	Impacts	18
3.1.1.4	Avoidance, Minimization and/or Mitigation Measures	19
3.2	Threatened and Endangered Species	19
3.2.1	Northern Spotted Owl (NSO)	19
3.2.1.1	Regulatory Setting	19
3.2.1.2	Impacts	20
3.2.1.3	Avoidance, Minimization and/or Mitigation Measures	20
CHAPTER 4	CUMULATIVE IMPACTS	22
4.1	Cumulative Impacts	22

CHAPTER 5	CALIFORNIA ENVIRONMENTAL QUALITY ACT EVALUATION	23
5.1	CEQA Environmental Checklist	23
CHAPTER 6	LIST OF PREPARERS	34
CHAPTER 7	REFERENCES	35
APPENDIX A	COORDINATION AND CONSULTATION	37
APPENDIX B	TITLE VI POLICY STATEMENT	38
APPENDIX C	MITIGATION AND MONITORING COMMITMENTS	39

List of Figures **41**

FIGURE 1	PROJECT VICINITY MAP
FIGURE 2	PROJECT LOCATION MAP
FIGURE 3	DEPARTMENT OF INTERIOR LETTER
FIGURE 4	TYPICAL CROSS SECTIONS
LAYOUT 1	DESIGN LAYOUT
LAYOUT 2	DESIGN LAYOUT
LAYOUT 3	DESIGN LAYOUT
LAYOUT 4	DESIGN LAYOUT
LAYOUT 5	DESIGN LAYOUT
LAYOUT 6	DESIGN LAYOUT
LAYOUT 7	EROSION CONTROL PLANS
LAYOUT 8	EROSION CONTROL PLANS
LAYOUT 9	EROSION CONTROL PLANS

List of Technical Studies that are Bound Separately

Biological Assessment (NSO)
Natural Environment Study
Floodplain Evaluation Report
Historical Property Survey Report
Archaeological Survey Report
Hazardous Waste Reports
Initial Site Assessment
Preliminary Site Investigation (Geophysical Survey) and Soil and Water Analysis

List of Abbreviated Terms

AC	Asphalt Concrete
ADA	Americans with Disabilities Act
ADT	Annual Daily Volume
APE	Area of Potential Effects
BEI	Bank Enabling Instrument
C	Celsius
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CDFG or DFG	California Department of Fish and Game
DCH or CH	Designated Critical Habitat or Critical Habitat
EO	Executive Order
FHWA	Federal Highway Administration
ft	Foot/Feet
ISA	Initial Site Assessment
LSR's	Late Successional Reserves
LUST	Leaking Underground Storage Tank
mi	Mile(s)
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic Atmospheric Administration
NSO	Northern Spotted Owl
OGAC	Open Grade Asphalt Concrete
PHV	Peak Hour Volume
PM	Post Mile
RAC	Rubberized Asphalt Concrete
RCB	Reinforced Concrete Box
RWQCB	Regional Water Quality Control Board
SHOPP	State Highway Operation and Protection Program
SR 89	State Route 89
STAGE	Siskiyou Transit and General Express
STNF	Shasta Trinity National Forest
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TCR	Transportation Concept Report
TE	Threatened or Endangered
USACE	United States Army Corps of Engineers
USC	United States Code
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WPCP	Water Pollution Control Plan

Chapter 1 Purpose and Need

1.1 Project Purpose

The purpose of this Project is to improve the highway alignment and geometrics along SR 89 in Siskiyou County between Post Miles (PM) 3.0 and 4.0 near Dead Horse Summit.

1.2 Project Need

The need for this project is to reduce fatal and injury accidents in the vicinity of Dead Horse Canyon Road. Many accidents at this location occur during icy and snowy conditions.

1.3 Project Background

The highway at the Dead Horse Summit location is prone to black ice and snow pack conditions during the winter. These conditions cause accidents in this area with a propensity occurring at the sag of SR 89 over Davis Creek. All the alternatives were developed with the following objectives: Increasing sun exposure to the highway; elevating the roadway sag to eliminate the potential for icing; and improving the roadway geometrics to reduce driver over-correction. All the alternatives were subject to concerns about project impacts to the environment, including but not limited to: wetland and riparian habitat, old growth forest, and studies of sensitive plant and animal species.

The programmed cost for this project is \$3.5 million and construction should take place during the summer of 2008.

Chapter 2 Project Alternatives

2.1 Alternative Development Process

Alternatives were developed in conjunction with Regional and System Planning and Traffic Safety data. The following summarizes how planning and traffic data influence the alternative development process.

2.1.1 Planning

2.1.1.1 Regional and System Planning

State Route 89, an Interregional Road System, is a regional north-south route and is part of the U.S. Forest Service Byway System from PM 0.0 in Plumas County to PM R34.6 in Siskiyou County. It is a two lane conventional highway functionally classified as both a Minor Rural Arterial in Plumas and Tehama Counties and a Principle Rural Arterial in Shasta and Siskiyou Counties.

2.1.1.2 State Planning

The 2002 Transportation Concept Report (TCR) calls for Route 89 to remain a two-lane conventional highway on its present alignment, and to be maintained and rehabilitated, as necessary, at its present width. The TCR also states that operational improvements and safety projects should be considered on a limited basis, and constructed to appropriate standards. State Route 89 is designated as a Volcanic Legacy Scenic Byway All American Road.

2.1.1.3 Regional Planning

Resolution No. 02-2 from the Siskiyou County Local Transportation Commission concurs with the State TCR and resolves to consider the TCR during preparation of the Regional Transportation Improvement Program. The basis for this resolution is the TCR's balanced and logical approach to solving future transportation problems in the corridor.

2.1.1.4 Local Planning

The project will not affect the capacity or design speed of the subject section of highway and will have no impact on economic growth or the rate of development, commercial, residential, or otherwise.

2.1.1.5 Transit Operator Planning

Siskiyou Transit and General Express (STAGE) provides Siskiyou County's local and regional transit service. The Interstate 5 line provides service on SR 89. In addition, Greyhound Bus operates in each of the four counties along SR 89, however, service is not provided to stops along SR 89. This project will not effect existing transit service.

2.1.1.6 Current and Forecasted Traffic

The most recent 2002 Caltrans Transportation Concept Report indicates Year 2010 Annual Daily Traffic (ADT) for State Route 89 in the Dead Horse Summit area at 2,300. The Peak Hour Volume is 357. Accident data shows 14 collisions occurring from May 1998 through April 2003 with ten of the accidents occurring in curve #2. The type of accidents that occurred most often on this stretch of road were from vehicles that ran off the road during snowy and icy road conditions (eleven of the recorded fourteen incidents). Environmental factors show that a majority of the accidents occurred during daylight hours.

2.2 Project Alternatives

Final selection of an alternative will not be made until after the full evaluation of environmental impacts, full consideration of public review comments, and approval of the final environmental document. Four alternatives were identified as potential solutions to meet the purpose and need discussed earlier in this study.

2.2.1 No Build Alternative

Under CEQA, environmental review must consider the effects of not implementing the proposed project. Existing conditions would not be changed as a result of the no-build alternative. Although this alternative would not result in the environmental impacts identified in this study, it would not achieve the basic purpose and need for the proposed project, which is to provide the needed safety improvements.

2.2.2 Build Alternative (Preferred – Alternative A)

Improve highway geometrics by modifying the radii at two curves (1,300' and 4,500' respectively) near Dead Horse Summit on State Route 89 and by lowering the crest and raising the sag at a serious dip location within the project limits. This alternative produces the smoothest alignment, but also has the largest amount of wetland mitigation. Three acres of land will need to be acquired from the Red River Lumber Company and a four acre permanent roadway easement will need to be established with the United States Forest Service

- Roadway Construction \$3.2 million
- Right-of-way \$260 K
- Wetland Mitigation \$40 K
- Total estimated cost \$3.5 million

2.3 Alternatives Considered and Withdrawn

2.3.1 Alternative B

Improve highway geometrics by modifying the radii of two curves (1,000' and 1450' respectively) near Dead Horse Summit on State Route 89 and by lowering the crest and raising the sag at a serious dip location within the project limits. This alternative is a minimal design that would bring the highway up to current design standards.

2.3.2 Alternative C

Improve highway geometrics by modifying the radii of two curves (1,000' and 2,700' respectively) near Dead Horse Summit on State Route 89 and by lowering the crest and raising the sag at a serious dip location within the project limits. Alternative C pulls the highway alignment to the north to reduce the amount of wetland impact on the south side of the highway.

Chapter 3 Affected Environment, Environmental Consequences, and Mitigation Measures

3.1 Biological Environment

The Federal Highway Administration (FHWA) and the California Department of Transportation (Department) propose a curve improvement on State Route (SR) 89 between Post Mile (PM) 3.0 and 4.0, in Siskiyou County. The project is located in Siskiyou County near Bartle ¼ mile south to ¾ miles north of Dead Horse Summit (elevation 4,505 ft). This portion of SR 89 is considered steep (5.4% average downgrade, west to east) and subject to snow and ice in the winter. This is mountainous terrain that experiences winter weather. The existing horizontal alignment of this segment includes two curves. One of the curves has an existing radius of 1,000 feet, while the other has an existing radius of 1,050 feet. The project can be located using the Dead Horse Summit Quadrangle 7.5' map, and the following coordinates: Township 39N, Range 2E, and Sections 19 and 20.

3.1.1 Wetlands and Other Waters

Waters of the United States (Waters) include all navigable surface waters and their tributaries, all interstate waters and tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. The regulatory limit for non-tidal waters is the ordinary high water mark (OHWM).

3.1.1.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 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. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

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 (ACOE) with oversight by the Environmental Protection Agency (EPA).

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, 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 Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If DFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

3.1.1.2 Affected Environment

The project area consists of Klamath mixed conifer (Mayer and Laudenslayer, 1988) and is dominated by a moderate to dense coniferous tree overstory mixed with both overstory and understory hardwoods. Dominant conifer species include Douglas' fir (*Pseudotsuga menziesii*) and ponderosa pine (*Pinus ponderosa*), with occasional sugar pine (*Pinus lambertiana*), and incense cedar (*Calocedrus decurrens*). Dominant hardwoods include California black oak (*Quercus kelloggii*), and canyon live oak (*Q. chrysolepis*), with occasional madrone (*Arbutus menziesii*). Understory vegetation includes sparse to dense shrub growth such as white-leaf manzanita (*Arctostaphylos viscida*), western redbud (*Cercis occidentalis*), buckbrush (*Ceanothus cuneatus*), deerbrush (*C. integerrimus*), poison oak (*Toxicodendron diversiloba*), and bush tanoak (*Lithocargus densiflora echinoides*), with variable grass and forb layers.

The project area lies within a region characterized by a Mediterranean climate, with cool, wet winters and hot, dry summers. Precipitation is on average 30-60 inches annually, most of which occurs between November 1 and April 30. Air temperatures average between a January's high of 53°F, to an average of 95°F during July. The

year-round average high is approximately 61°F. The growing season is thermic and occurs between February 1 and October 31.

The hydrology of the project area is based on the landform topography and the highway cut. There is one perennial waterway (Davis Creek) that runs year around, subsequently fed by spring channels during the dry, hot summers. Existing culverts move water from the north side of the highway to the south. There is a riparian corridor that exists adjacent to Davis Creek and has been identified within this document.

The project area is comprised of the Obie-Goulder-Mounthat map unit. This map unit has the highest rainfall of the soils in this group. The soils formed in debris flow and are tephra derived from extrusive igneous rock. Elevation ranges from 2,500 feet in the McCloud area to 6,800 feet in the Burney Mountain area. The average annual precipitation is 30 to 60 inches, and the average annual temperature is 39 to 44 degrees F, the average frost-free season is 50 to 80 days. Slopes range from 2 to 75 percent.

Timber harvesting is the largest industry in this area. Management is concerned that any forest fires that travel through the project area will destroy tree and understory root systems which currently anchor areas with deep soil concentrations, creating the opportunity for earth slides during the rain/snow seasons. In areas of deep and very deep soils, reforestation can be accomplished by proper site preparation.

3.1.1.3 Impacts

Two jurisdictional waters will be impacted by this project; Davis Creek, and one unnamed drainage. Davis Creek is a small perennial creek that drains into Colby Meadow south of the project area and flows year-around. This creek is buffered by a small riparian strip consisting of Speckled Alder (*Alnus incana* ssp. *Tenufolia*), Pacific Dogwood (*Cornus nuttallii*), Northern Chain Fern (*Woodwardia fibriata*) and other riparian vegetation. The unnamed drainage is an intermittent creek that flows during the rainy season and is not buffered by riparian vegetation.

A small wetland is located adjacent to SR 89 and south of Dead Horse Canyon Road near Davis Creek. This wetland is approximately 0.48 acres in size and consists mainly of Speckled Alder (*Alnus incana* ssp. *Tenufolia*). The wetland has defined upland boundaries with the presence of white fir and ponderosa pine that make up the majority of the merchantable mixed-conifer forest. The wetland will be lost due to the placement of fill to realign the road.

Approximately 456 linear feet of temporary impacts to waters of the U.S. will occur within the project area when the new culverts are placed for the road realignment. Unnecessary culverts will be removed and the channel restored to pre-culvert conditions. Because of design constraints (cost, feasibility, required alignment), this impact is unavoidable. The old SR 89 roadbed will also be restored to pre-road conditions.

3.1.1.4 Avoidance, Minimization and/or Mitigation Measures

The Department anticipates that the permanent loss of in-channel function and riparian vegetation will be mitigated at an offsite location. There is no established Bank Enabling Instrument (BEI) found in Siskiyou County that will cover the project area impacts. There is also currently no In-Lieu Fee arrangement with the San Francisco ACOE. Therefore, the Department proposes to work with the Shasta-Trinity National Forest to restore and enhance White Deer Lake, approximately 5 miles North of the project area. This proposed project would replace a man-made lodgepole pine forest wetland (White Deer Lake) with a seasonal vernal pool aspen meadow, returning the area to a more natural environ.

If after further study, the proposed wetland mitigation at White Deer Lake becomes impractical, a similar wetland restoration project will be developed as a mitigation proposal for implementation.

The Department has developed an “Erosion Control Plan” that will replant and reseed the area of impact east of Davis Creek and other areas throughout the project limits. Additionally, the sections of abandoned State Route will be obliterated and planted with natural vegetation. New and old drainages will be replanted with native riparian species and encouraged to develop wetland characteristics as they establish (Refer to Layouts 7, 8, and 9).

3.2 Threatened and Endangered Species

Threatened or endangered (T & E) species are species of plants and animals that are formally listed as endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA). The Department is required to determine if the proposed projects will involve—and possibly affect—proposed or listed species or their critical habitat.

3.2.1 Northern Spotted Owl (NSO)

3.2.1.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical

to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game (CDFG) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

3.2.1.2 Impacts

Direct: There will be no direct impacts to Northern Spotted Owl (NSO) from this widening project. Activity Centers identified in 2006 are more than 1.3 miles away from the project area. The project will not likely affect the NSO. The project will modify 3.2 acres of dispersal and foraging habitat within Critical Habitat (CH) designation.

Indirect: The NSO could potentially be indirectly affected by the permanent loss of 5.4 acres of foraging and dispersal habitat directly adjacent to the highway. In this area, there is no shortage of foraging and dispersal habitat. Improving nesting and roosting habitat in the Shasta Trinity National Forest (STNF-see Proposed Mitigation below) will provide compensation for this impact.

This project will require the removal of 5.4 acres of foraging and dispersal habitat (Critical and non-Critical Habitat) for the NSO immediately adjacent to SR 89. It has been determined that this habitat removal is *not likely to adversely affect* the Northern spotted owl or its remaining Critical Habitat.

3.2.1.3 Avoidance, Minimization and/or Mitigation Measures

On October 17, 2002, the Department met with Peter Epanchin (USFWS Wildlife Biologist) at the Sacramento Field office to discuss a new type of mitigation proposed for NSO habitat impacts. A proposal was initiated with the advent of two Department projects proposed for construction in 2006, the Cayton Creek Widening and the Lake Britton Bridge Replacement, which had extensive USFWS consultation for NSO.

The Department presented project background information and discussed the history of mitigation for NSO impacts in District 2, particularly for foraging and dispersal habitat. In addition and more significantly, the Department proposed a new mitigation approach for impacts to NSO habitat. The proposal involved the STNF and funding NSO habitat improvement projects in late-successional reserves (LSRs). These LSRs are within (DCH) *designated Critical Habitat* for the NSO and are managed as habitat for late successional and old growth related species, including the NSO. On May 14, 2003, the Department, STNF and the USFWS agreed in principle to the mitigation concept.

Proposed Fuel Reduction as Compensation: Most of the habitat improvements will occur in nesting and roosting habitat with some work in adjacent foraging areas. The work will include brush cutting and ladder-fuel thinning (small tree removal). The STNF and the Department will work together to pick suitable and appropriate stands for mitigation compensation. These sites are yet to be determined.

This habitat improvement work will benefit numerous ecosystem functions and help prevent catastrophic destruction from wildfire. Selective thinning would accelerate the timeline of these areas toward development of mature stand structure.

The Department proposes to contribute \$50K towards selectively thinning LSRs within designated CH for the NSO. The amount of mitigation money and consequently the amount of LSR habitat improvement is based on prior discussion between the Department (Carolyn Brown –Mitigation Coordinator, Daniel Whitley–North Region Biologist), U.S. Fish and Wildlife Service (Peter Epanchin–USFWS Wildlife Biologist) and the Shasta–Trinity National Forest (Frank Del Carlo–STNF Silviculturist). Appropriate compensation was discussed and a financial plan developed. The location of fuel reduction and thinning will be upon mutual agreement between the USFS, USFWS and the Department.

Chapter 4 Cumulative Impacts

4.1 Cumulative Impacts

There are no known future State, tribal, local, or private actions (not involving a Federal action) that will occur within the action area. Please note that one Federal action is proposed just north of the project area.

Chapter 5 California Environmental Quality Act Evaluation

5.1 CEQA Environmental Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The CEQA impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. Please refer to the following for detailed discussions regarding impacts:

CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulations, Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resource Code, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)

CEQA requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate no impacts. A “no impact” reflects this determination. Any needed discussion is included in the section following the checklist.

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

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 buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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"/> |

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

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- d) Expose sensitive receptors to substantial pollutant concentrations?
- e) Create objectionable odors affecting a substantial number of people?

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?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
- 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?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

COMMUNITY RESOURCES - Would the project:

- a) Cause disruption of orderly planned development?

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

- b) Be inconsistent with a Coastal Zone Management Plan?
- c) Affect life-styles, or neighborhood character or stability?
- d) Physically divide an established community?
- e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?
- f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?
- g) Affect property values or the local tax base?
- h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines)?
- i) Result in alterations to waterborne, rail, or air traffic?
- j) Support large commercial or residential development?
- k) Affect wild or scenic rivers or natural landmarks?
- l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours and temporary access, etc.)?

CULTURAL RESOURCES - Would the project:

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

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:

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

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

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

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

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

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

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

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

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

HYDROLOGY AND WATER QUALITY - Would the project:

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

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

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

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

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

<input type="checkbox"/>	<input type="checkbox"/>	<input 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 which would result in flooding on- or off-site?

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

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

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

f) Otherwise substantially degrade water quality?

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

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- 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?
- j) Inundation by seiche, tsunami, or mudflow?

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, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
- b) Conflict with any applicable habitat conservation plan or natural community conservation plan?

MINERAL RESOURCES - Would the project:

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

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?
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

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?

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?

POPULATION AND HOUSING - Would the project:

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

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

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

PUBLIC SERVICES -

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

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

RECREATION -

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

TRANSPORTATION/TRAFFIC - Would the project:

- a) Cause an increase in traffic which 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)?
- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?
- 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?
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e) Result in inadequate emergency access?
- f) Result in inadequate parking capacity?
- g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

UTILITIES AND SERVICE SYSTEMS - Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- 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?

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

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

MANDATORY FINDINGS OF SIGNIFICANCE -

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

Yes

No

SECTION 4(F) RESOURCES – Does the project:

a) Result in the use of any publicly owned land from a park, recreation area, or wildlife and waterfowl refuge, as defined by section 4(f) (23 CFR 771.135)?

b) Affect a significant archaeological or historic site, structure, object, or building, as defined by section 4(f) (23 CFR 771.135)?

c) Involve “constructive use”, as defined by section 4(f) (23 CFR 771.135)?

Chapter 6 List of Preparers

This Initial Study (IS) was prepared by the California Department of Transportation, North Region Environmental Management Office – Redding. The following Caltrans staff participated in preparing this document:

Lena R. Ashley, Chief, North Region Environmental Services. Consultation

Thomas Balkow, Senior Environmental Planner. Consultation

Justin Borders, Project Engineer. Design Studies

Ed Espinoza, Associate Environmental Planner (Initial Study Author)

Blossom Hamusek, Associate Environmental Planner (Archaeologist, Heritage Resource Coordinator). Contribution: Historic Property Survey Report, Archaeological Survey Report

Kelly Kawsuniak, Associate Environmental Planner (Biologist). Contribution: Biological Assessment (NSO), Natural Environmental Study Memorandum

William Lehman, Project Engineer. Project Plans

Jill Nystrom, Associate Right of Way Agent. Contribution: Federal Lands Coordination

George Petershagen, Associate Environmental Planner (Principal Architectural Historian). Contributor to HPSR.

Jeff Pizzi, Caltrans Engineer. Contribution: Hazardous Waste Initial Site Assessment

Jeff Steppat, Project Engineer. Authored Dead Horse Summit Project Report

Patrick Sullivan, Associate Landscape Architect, Contribution: Visual Impact Analysis

Daniel Whitley, Associate Environmental Planner (Biologist). Consultation.

Derek Willis, Project Manager

Chapter 7 References

- Albers, J.P., 1964. Geology of the French Gulch Quadrangle, Shasta and Trinity Counties, California, Geological Survey Bulletin 1141-J, 70 p.
- Department of Transportation. 1999. *Standard Specifications, July 1999*. State of California, Department of Transportation. 339 pp.
- Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1). U.S. Army Waterways Experiment Station, Vicksburg, MAS.
- GretagMacBeth, Munsell, Corporation, 1975. Munsell Soil Color Charts. GretagMacBeth Corp., New Windsor, N.Y.
- Hickman, J.C. (Editor). 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles, CA 1400pp.
- Holland, R.F., PhD. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game, Sacramento, California. 156pp.
- Leon, Luis R., et al., 2000. *Construction Site Best Management Practices (BMP's) Manual*, State of California, Department of Transportation, Storm Water Quality Handbooks.
- Mayer, K. E., William F. Laudenslayer Jr., Editors. 1988. A Guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection. 166pp.
- Reed P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). U.S. Fish and Wildlife Service Biological Report 88 (26.10).
- USDA. Date unknown. *Soil Survey of Intermountain, California, Parts of Lassen, Modoc, Shasta, and Siskiyou Counties*. Volumes I and II.
- USDA, Forest Service, September 1997. Ecological Subregions of California: Section and Subsection Descriptions (R5-EM-TP-005). USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- USDA, Soil Conservation Service. August 1974. Soil Survey of Intermountain Area, California, Parts of Lassen, Modoc, Shasta, and Siskiyou Counties. USDA, Natural Resources Conservation Service. Volumes I and II.

- United States Fish and Wildlife Service. 1990. *Final Rule: Endangered and Threatened Species; Threatened Status for the Northern Spotted Owl*. Federal Register, 50 CFR Part 17, Vol. 55, No. 123, June 26, 1990 [p26114-26194].
- United States Fish and Wildlife Service. 1992. *Final Rule: Endangered and Threatened Wildlife and Plants; Determination of Critical Habitat for the Northern Spotted Owl*. Federal Register, 50 CFR Part 17, Vol. 57, No. 10, January 15, 1992 [p1796-1838].
- United States Fish and Wildlife Service. March 24, 2003. *Northern Spotted Owls on Non-Federal Land*. www.greennature.com/article 188.html.
- Wetland Training Institute, Inc. 2001. *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual*. Glenwood, NM. WTI 01-2 143 p.
- Wetland Training Institute, Inc. 2004. *Pocket Guide to Hydric Soil Field Indicators*. Robert J. Peirce (ed.). Wetland Training

Appendix A Coordination and Consultation

The following agencies and organizations were contacted during the project development process:

- California Department of Fish and Game
- California Inventory of Historic Resources
- California Register of Historic Resources
- National Register of Historic Places
- UnknownTribe
- Unknown Rancheria
- State Historical Preservation Office – California
- Shasta-Trinity National Forest
- Siskiyou County Historical Society
- United States Fish and Wildlife Service

Appendix B Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*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

Appendix C Mitigation and Monitoring Commitments

Consultation History on New Mitigation Proposal for Northern Spotted Owl:

On October 17, 2002, the Department met with Peter Epanchin (USFWS Wildlife Biologist) at the Sacramento Field office to discuss a new type of mitigation proposed for NSO habitat impacts. A proposal was initiated with the advent of two Department projects proposed for construction in 2006, the Cayton Creek Widening and the Lake Britton Bridge Replacement, which had extensive USFWS consultation for NSO.

The Department presented project background information and discussed the history of mitigation for NSO impacts in District 2, particularly impacts to foraging and dispersal habitat. In addition and more significantly, the Department proposed a new mitigation approach for impacts to NSO habitat. The proposal involved the Shasta-Trinity National Forest (STNF) and funding NSO habitat improvement projects in late-successional reserves (LSRs). These LSRs are within *designated Critical Habitat* for the NSO and are managed as habitat for late successional and old growth related species, including the NSO. On May 14, 2003, the Department, STNF and the USFWS agreed in principle to the mitigation concept.

Proposed Fuel Reduction as Compensation:

Most of the habitat improvements will occur in nesting and roosting habitat with some work in adjacent foraging areas. The work will include brush cutting and ladder-fuel thinning (small tree removal). The STNF and the Department will work together to pick suitable and appropriate stands for mitigation compensation. These sites are yet to be determined.

This habitat improvement work will benefit numerous ecosystem functions and help prevent catastrophic destruction from wildfire. Selective thinning would accelerate the timeline of these areas toward development of mature stand structure.

Wetland Mitigation:

The Department anticipates that the permanent loss of in-channel function and riparian vegetation will be mitigated at an offsite location.

Therefore, the Department proposes to work with the STNF to restore and enhance White Deer Lake, approximately 5 miles North of the project area. This proposed project would replace a man-made lodgepole pine forest wetland (White Deer Lake) with a seasonal vernal pool aspen meadow, returning the area to a more natural environ.

If after further study, the proposed wetland mitigation at White Deer Lake becomes impractical, a similar wetland restoration project will be developed as a mitigation proposal for implementation.

The Department has developed an “Erosion Control Plan” that will replant and re-seed the area of impact east of Davis Creek and other areas throughout the project limits. Additionally, the sections of abandoned State Route will be obliterated and planted with natural vegetation. New and old drainages will be replanted with native riparian species and encouraged to develop wetland characteristics as they establish (Refer to Layouts 7, 8, and 9).

List of Figures

Figure 1	Project Vicinity Map
Figure 2	Project Location Map
Figure 3	USFWS Letter
Figure 4	Typical Cross Section
Layout 1	Design Layout
Layout 2	Design Layout
Layout 3	Design Layout
Layout 4	Design Layout
Layout 5	Design Layout
Layout 6	Design Layout
Layout 7	Erosion Control Plans
Layout 8	Erosion Control Plans
Layout 9	Erosion Control Plans



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In Reply Refer To:
1-1-06-I-1684

Mr. Tom Balkow
Senior Environmental Planner
Department of Transportation
Northern Region
Post Office Box 496073
Redding, California 96049-6073

AUG 10 2006

Subject: Informal Consultation for the Dead Horse Summit Curve correction (02-SIS-89-PM4.0/3.0 02-1C370K) Located Along State Route 89, Siskiyou County, California

Dear Mr. Balkow:

This is in response to your letter dated August 10, 2006, requesting the U.S. Fish and Wildlife Service's (Service) concurrence with the determination that the proposed action, Dead Horse Summit Curve Correction, is not likely to adversely affect the northern spotted owl (*Strix occidentalis caurina*) (NSO), NSO critical habitat, or any other listed threatened or endangered species, pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 *et. seq.*) (Act). The California Department of Transportation (Caltrans) and Federal Highway Administration are proposing to realign the roadway to reduce the horizontal curve, widen shoulders and the clear recovery zone, extend or replace existing culverts, and raise the highway away from a drainage adjacent to the Dead Horse Canyon Road on SR 89 in Siskiyou County between Post Mile 3.0/4.0. This project will require vegetation removal for a maximum of 37 feet on both side of the existing highway. Our comments and conclusions are based on (1) November 3, 2005 site visits, (2) the July 2006, *Biological Assessment for Northern Spotted Owls: Dead Horse Summit Curve Improvement Project*, (3) electronic mail correspondence, and (3) other information available to the Service.

Protocol surveys were conducted for NSO from March thru June 2006, no NSO were detected. The closest known NSO activity center is approximately 2 miles northeast of the project area.

The dominant plant species in the project area are ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*) and incense cedar (*Calocedrus decurrens*) and the canopy cover of the habitat along the road averages 50%. The project will remove 5.4 acres of potential foraging-dispersal habitat; 2.2 acres is outside designated critical habitat and 3.2 acres falls within CA-2, a 25,411 acre Critical Habitat Unit. In addition to being a part of CA-2,



Figure 3

Tom Balkow

2

the project site also falls within the Late Successional Reserve (LSR) System, specifically the 26,891 acre RC-357 Algoma/MLSA DD-79 Bartle unit.

While there are some large trees in the project area, there is no nesting-roosting habitat within the project area. The open canopy and disturbance from road traffic lend the area to be of marginal quality for NSO. While the project will permanently remove 3.2 acres from Critical Habitat Unit CA-2 and from LSR RC-357 Algoma/MLSA DD-79 Bartle, this modification is not considered adverse since the area impacted is less than 0.013% of CA-2 and RC-357 Algoma/MLSA DD-79 Bartle. Caltrans has proposed to provide approximately \$48,000 to the Shasta-Trinity National Forest to improve forest stand characteristics (fuels reduction and thinning) in late-successional reserves within designated NSO critical habitat. Additionally, to meet protocol requirements, NSO surveys will be conducted in 2007.

Based upon the information provided and information in our files, we concur with your determination that the proposed project is not likely to adversely affect the northern spotted owl. Additionally, the project proposes to work with the Shasta-Trinity National Forest to improve NSO habitat, therefore the Service believes that this project may contribute to the recovery of this species. We appreciate your cooperation and participation in the conservation of listed species. Please provide us written reports on the results of the 2007 NSO surveys and of total acres and locations for fuels reduction and thinning.

Unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act, is necessary. Please address any questions or concerns regarding this response on the Dead Horse Summit Curve Correction Project to Amy Fesnock or Roberta Gerson, Forest and Foothills Branch Chief, at (916) 414-6600.

Sincerely,



Chris Nagano
Deputy Assistant Field Supervisor

cc:

District Ranger, U.S. Forest Service, Shasta-Trinity National Forest, Mc Cloud Ranger District,
Mc Cloud, California

Debbie Derby, Wildlife Biologist, U.S. Forest Service, Shasta-Trinity National Forest, Mc Cloud
Ranger District, Mc Cloud, California

Forest Supervisor, U.S. Forest Service, Shasta-Trinity National Forest, Redding, California

Bob Williams, California Department of Fish and Game, Region 1, Redding, California

Kelly Kawsuniak, Caltrans North Region, Environmental Planning, Redding, California

Figure 3 (con't.)