

Appendix D Minimization and/or Mitigation Summary

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:

Construction Feature or Activity	Recommendation
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 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.*

Appendix E Design Layouts for the Proposed Project



