

**State of California
Department of Fish and Wildlife**

Memorandum

Governor's Office of Planning & Research

Aug 04 2020

Date: August 3, 2020

STATE CLEARINGHOUSE

To: Amanda Lee, Environmental Coordinator
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From: Curt Babcock, Habitat Conservation Program Manager
Northern Region

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Curt Babcock

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Subject: HUM 36 Three Bridges Project (SCH# 2020060581)

On June 26, 2020, CDFW received a draft Initial Study/Mitigated Negative Declaration (IS/MND) from the California Department of Transportation (Lead Agency) for the Three Bridges Project (Project), Humboldt County, California. CDFW understands that the Lead Agency will accept comments on the project through August 3, 2020. As a Trustee Agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary to sustain their populations. As a Responsible Agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code (FGC) that conserve the State's fish and wildlife public trust resources. CDFW offers the following comments and recommendations in our role as a Trustee and Responsible Agency under the California Environmental Quality Act (CEQA; California Public Resource Code §21000 *et seq.*).

Project Description

The Lead Agency proposes to replace two bridges and widen one bridge on State Route (SR) 36 in Humboldt County. The Project also includes widening shoulders and modifying bridge rails to meet current design standards. The bridges include:

- Hely Creek Bridge (Bridge No. 04-0092) at Post Mile (PM) 11.46
- Little Larabee Creek Bridge (Bridge No. 04-0102) at PM 25.27
- Butte Creek Bridge (Bridge No. 04-0116) at PM 34.52

The bridges at Hely Creek and Butte Creek would be replaced with wider bridges, and the existing bridge at Little Larabee Creek would be widened. All bridge widths would be increased from current widths to 12 feet with 4- or 8-foot shoulders. Bridge approaches would be widened to accommodate transitions from the bridge to the existing roadway and upgrading bridge rails.

Amanda Lee
California Department of Transportation
August 3, 2020
Page 2 of 8

Project Design and Lake or Streambed Alteration Agreement

CDFW's Conservation Engineering Branch reviewed the IS/MND and provided a summary of information requests and preliminary comments to Caltrans staff via email on July 28, 2020. As currently proposed, certain Project components have the potential to cause potentially significant impacts to Hely, Little Larabee, and Butte Creeks via impacts of new rock riprap installation, and Project components that would facilitate continuing scour, streambank instability, and limit natural movement of sediment, debris, and flood conveyance.

Therefore, CDFW has the following recommendations that would likely be incorporated as measures in the Project's Lake or Streambed Alteration Agreement to prevent potentially significant impacts, and should be incorporated into the IS/MND:

Hely Creek:

1. The current proposed bridge at Hely Creek should be lengthened by moving the abutments away from the channel overbanks. This will eliminate the need for riprap, lessen shear stresses that cause localized scour and streambank instability, and will allow more natural movement of sediment, debris, and flood conveyance.
2. The Project should allow the low-flow channel at Hely Creek bridge to naturally meander rather than realigning the channel.
3. The Project should avoid rock riprap on the abutment slopes at Hely Creek. Local abutment scour and contraction scour can be avoided by lengthening the bridge opening per recommendation 1.
4. Remove existing rock riprap along riverbank left from previous scour countermeasure efforts.
5. Remove the existing spread footings 5-feet below original grade or below the calculated Total Scour Depth, whichever is greater.

Little Larabee Creek:

1. The Project proposes installation of rock riprap placed along abutment slopes. CDFW is unclear as to whether this riprap is new, or if rock riprap currently exists at the abutment slopes. The Project should avoid installation of new rock riprap. However, if the proposed rock riprap is an in-kind replacement, CDFW recommends the Project include vegetated rock riprap as part of the design. Caltrans should refer to their Design Information Bulletin No. 87-01 "*Hybrid Streambank Revetments: Vegetated Rock Slope Protection*" and the Federal Highway Administration's Hydraulic Engineering Circular No. 23 - "*Bridge Scour and Stream Instability Countermeasures: Experience, Selection, and Design Guidance*", volume 1, Third Edition for more guidance on vegetated rock riprap designs.

Amanda Lee
California Department of Transportation
August 3, 2020
Page 3 of 8

Butte Creek:

1. The Project should avoid use of rock riprap
2. If rock riprap would be needed to protect the abutments from scour failure, the bridge should be lengthened appropriately to reduce shear stresses along the abutment slopes in order to greatly reduce localized abutment scour and contraction scour.
3. The proposed bridge should be lengthened to fully span the bankfull channel width.
4. Remove the existing piles 5-feet below original grade or below the calculated Total Scour Depth, whichever is greater.

Nesting Birds

The IS/MND states:

“Partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 to September 15) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal. Removed nest material would be prevented from falling into waterways. Exclusionary devices would not be used to prevent birds nesting on the existing bridge structures as these devices have the potential to entrap or harm night roosting bats.”

Nesting birds are generally protected by Fish and Game Code sections 3503 and 3503.5. Nest removal of partially constructed nests is not a preferred method of avoiding impacts to nesting birds, because it results in birds expending reproductive effort to construct nests that are later destroyed. Further, removal of in-progress nests causes potential to inadvertently remove nests with eggs if nests are not removed at regular intervals or nests are constructed more rapidly than anticipated. It is preferable to implement bird-and bat-safe exclusion methods such as one way exits for bats (installed after the maternity season but before hibernation), and products that create surfaces or angles that birds will not attempt use for nesting or that nests will not adhere to, as described in Ontario Ministry of Natural Resources and Forestry (2017) and other similar resources. Netting material should not be used as it is highly likely to result in take of birds and bats.

Surface modifications may also make the bridges less attractive to day-roosting bats, such as the single day-roosting State Species of Special Concern (SSC) Townsend's big-eared bat (*Corynorhinus townsendii*) that was consistently observed using the southeast side of the bridge in summer 2019 surveys.

Amanda Lee
California Department of Transportation
August 3, 2020
Page 4 of 8

Pacific Lamprey

The IS/MND references the 2010 document “Best Management Practices to Minimize Adverse Effects to Pacific Lamprey (*Entosphenus tridentatus*)” (USFWS 2010). CDFW recommends reviewing and implementing the updated guidance provided in the more recent document, “Best management guidelines for native lampreys during in-water work” (Lamprey Technical Workgroup 2020) to the greatest extent feasible.

Sonoma Tree Vole

Regarding Sonoma tree vole (*Arborius pomo*), a State SSC, the IS/MND states:

“No species-specific surveys were performed for this species; however, trees slated for removal were investigated for signs of tree vole use.”

The IS/MND does not disclose whether signs of tree vole use were observed, nor provide information on methods (duration, location, effort level) of the investigations. CDFW recommends that the IS/MND quantify the amount of potential Sonoma tree vole habitat that will be removed and determine whether this impact is potentially significant. Potential habitat should be avoided to the greatest extent feasible.

Large Diameter Trees

The IS/MND proposes to remove twelve “large-diameter” trees. At least four of these trees are coast redwoods (*Sequoia sempervirens*) greater than 50-inch diameter at breast height (DBH), ranging from 50 – 72-inch DBH. Trees greater than 36-inch DBH may be considered late-seral, because they begin to show signs of decadence (large limbs, broken tops, hollows) which makes them favored habitat for a suite of sensitive species. Late-seral stands also begin to take on epiphytic species which are otherwise found only in old growth stands. It can take hundreds of years after tree removal before a stand begins to manifest the complexity and species diversity exhibited by stands with large, old trees. Removal of late-seral or large-diameter old trees is a potentially significant impact. These trees are essentially irreplaceable due to the amount of time it takes to achieve their size, the unique micro-ecosystem supported by their upper canopy habitat, and their overall rarity on the landscape.

According to the IS/MND, the Project could also result in impacts to the Structural Root Zone (SRZ) and Absorber Root Zone (ARZ) of an additional three large diameter trees: a 99 inch DBH Coast Redwood (tree 10356), a 54 inch DBH Coast Redwood (tree 10981) and an approximately 30 inch DBH Coast Redwood (tree 10982).

Amanda Lee
California Department of Transportation
August 3, 2020
Page 5 of 8

The IS/MND states:

“The project could result in moderate impacts (7.8 – 22.8%) to the ARZ of an additional three coast redwoods (Trees 10356, 10981, 10982) (Table 4). Tree 10356 would also have permanent impacts to 12.7% of its SRZ, and trees 10981 and 10982 could experience branch trimming within approximately 30 feet of the ground surface for crane operations.”

These impacts appear to be potentially significant. The Lead Agency should propose appropriate mitigation for these impacts, which may be available on the proposed wetland mitigation parcel referenced in the IS/MND.

Off-site Mitigation

Regarding impacts to wetlands, the IS/MND states:

“Mitigation for permanent wetlands impacts would be implemented off-site. The appropriate measures would be identified and coordinated with the USACE, NCRWQCB, CDFW and any other administering agencies. Caltrans is currently assessing a property on State Route 36 as a possible mitigation site for this project, with opportunities for wetland preservation and protection and wetland creation. The property identified is approximately 115 acres, has high value wetland features and watershed area and contains valuable upland mature forest habitat. Caltrans would propose a Cooperative Agreement with the NCRWQCB and CDFW to purchase the parcel in CDFW’s name to satisfy wetland mitigation needs for this project and other projects on SR 36 and US 101 within the Lower Eel River Watershed. Caltrans has been in coordination with these agencies to move forward with this effort. Given that temporarily impacted areas would be restored and permanent impacts would be mitigated, a determination was made that the project would have a “Less Than Significant Impact with Mitigation” on wetlands and other waters.

CDFW has been working with Caltrans to facilitate acquisition of the parcel mentioned in the IS/MND for mitigation purposes, and strongly supports purchase and protection in perpetuity of the wetland, potential wetland, and upland mature forest habitats on this parcel as mitigation for Project impacts. Preservation of and management for late-seral forest habitat conditions on this property would also provide mitigation for potentially significant Project impacts to large diameter trees. Additionally, this mitigation approach would benefit species such as Pacific fisher and Sonoma tree vole, if further analysis determines that Project impacts to these species are potentially significant.

The IS/MND should better describe the mitigation parcel and the habitat values and management strategies that its acquisition and protection in perpetuity will provide. At a

Amanda Lee
California Department of Transportation
August 3, 2020
Page 6 of 8

minimum, the IS/MND should better quantify potentially significant impacts to late-seral/large diameter trees, in addition to the impacts that have already been quantified for wetland and riparian habitat, and compare these impacts to habitat values and potential (habitat acreages and quality of wetland, potential wetland, and upland mature forest) of the property that the Lead Agency intends to acquire for mitigation purposes.

This analysis can be used to develop appropriate performance standards for offsite mitigation acreages and/or ratios if the property mentioned in the IS/MND is not acquired and the Lead Agency must search for an alternate mitigation site.

For any potentially significant impact, CDFW recommends the Lead Agency include details of proposed mitigations, including performance standards, such as mitigation ratios, and a draft MMRP in the IS/MND prior to notification for adoption.

Coho Salmon and Summer Steelhead

Take of Southern Oregon/Northern California Coast (SONCC) ESU of Coho Salmon (*Oncorhynchus kisutch*), a state Threatened Species, and summer-run Northern California steelhead (*Oncorhynchus mykiss irideus*), a state Candidate Endangered species, is anticipated as a result of the project. This is a potentially significant impact and will require State take authorization and full mitigation pursuant to CESA. The amount of take is not estimated in the IS/MND. Further coordination with CDFW will be required to ensure that the Biological Opinion or Incidental Take Permit application contains sufficient mitigation to ensure impacts are fully mitigated. Off-site eradication of non-native American bullfrog (*Lithobates catesbeianus*) has been proposed as mitigation for Project-related take of State-listed salmonids. Bullfrogs are known to prey upon juvenile salmonids and other aquatic species of special concern such as Western pond turtle (Garwood et al. 2010). As with the mitigation approach for wetland, riparian, and other habitats discussed above, CDFW recommends the IS/MND better describe the anticipated impacts and estimated State-defined take that will occur as a result of the Project, and the mitigation value of the proposed bullfrog eradication project, to be used as a performance standard for mitigation commitments for the Project.

Summary of Recommendations

1. Incorporate changes in bridge length, avoiding installation of rock riprap, and adjustments to abutments and footings as described above and per prior CDFW Conservation Engineering recommendations.
2. Implement bird and bat-safe exclusion measures instead of regularly removing partially constructed nests during the nesting season.
3. Use more recent guidance (Lamprey Technical Workgroup 2020) to develop BMPs for Pacific lamprey.

Amanda Lee
California Department of Transportation
August 3, 2020
Page 7 of 8

4. Impacts to large diameter trees may be potentially significant. The proposed mitigation parcel could provide adequate mitigation value, but this should be addressed and quantified in the IS/MND.
5. The IS/MND should better describe the anticipated take of State-listed salmonids from the Project, and the mitigation value of the proposed bullfrog eradication project, to be used as a performance standard for mitigation commitments for the Project.

These changes are necessary for CDFW to determine that the Project will have a less than significant impact on biological resources.

Thank you for the opportunity to comment on this draft IS/MND. CDFW staff are available to meet with you to consult with or address the contents of this letter in greater depth. If you have questions on this matter or would like to discuss these recommendations, please contact Senior Environmental Scientist Specialist Jennifer Olson at (707) 499-5081 or by email at jennifer.olson@wildlife.ca.gov.

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Amanda Lee
California Department of Transportation
August 3, 2020
Page 8 of 8

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