

State of California
Department of Fish and Wildlife



Memorandum

Date: January 11, 2021

Governor's Office of Planning & Research

Jan 12 2021

To: Mr. Matt Fowler
California Department of Transportation
District 5; Environmental Planning
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STATE CLEARINGHOUSE

DocuSigned by:

Gregg Erickson

From: Mr. Gregg Erickson, Regional Manager

California Department of Fish and Wildlife-Bay Delta Region, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534

Subject: San Lorenzo River Bridge and Kings Creek River Bridge Replacement Project, Initial Study/Mitigated Negative Declaration, SCH No. 2020120272, Santa Cruz County

The California Department of Fish and Wildlife (CDFW) has reviewed the proposed draft Initial Study/Mitigated Negative Declaration (IS/MND) for the San Lorenzo River Bridge and Kings Creek River Bridge Replacement Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW is submitting comments on the IS/MND as a means to inform the California Department of Transportation (Caltrans) as the Lead Agency, of our concerns regarding potentially significant impacts to sensitive resources associated with the proposed Project.

CDFW is a Trustee Agency with responsibility under CEQA §15386 for commenting on projects that could impact fish, plant and wildlife resources. CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as the California Endangered Species Act (CESA), the Native Plant Protection Act, the Lake and Streambed Alteration (LSA) Program and other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources. Pursuant to our jurisdiction, CDFW has the following concerns, comments, and recommendations regarding the Project.

Project Location and Description

Caltrans, as the lead agency, proposes to replace the existing bridges along State Route (SR) 9 at the San Lorenzo River Bridge (Bridge No. 36-0052) at post mile (PM) 13.6 and the Kings Creek Bridge (Bridge 36-0054) at PM 15.5 in unincorporated, Santa Cruz County, California.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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The Project will remove and replace both bridges with new single-span, standard-width structures consisting of 12-foot-wide lanes and 8-foot-wide outside shoulders. The existing metal beam guardrail would be removed and replaced with standard Midwest Guardrail. A taper would be paved on each side of the bridge to transition the new 8-foot-wide bridge shoulder to the existing roadway shoulder. Work in the streambeds will require use of a temporary diversion system to dewater work areas for demolition and removal of existing bridge abutments and piers. Existing bridge piers and their foundations would be removed from Kings Creek. It is anticipated that all work would occur within the existing state right-of-way. Existing utilities that would conflict with construction operations would be relocated. The proposed bridges would be constructed along the existing SR-9 alignment.

LAKE AND STREAMBED ALTERATION AGREEMENT

The Project has the potential to impact resources including mainstems, tributaries and floodplains associated with the San Lorenzo River and Kings Creek known to occur within the identified limits of the Project. If work is proposed that will impact the bed, bank, channel or riparian habitat, including the trimming or removal of trees and riparian vegetation please be advised that the proposed Project may be subject to LSA Notification. This includes impacts to drainage systems that connect to tributaries of main stem creeks and tributaries that occur within the Project Biological Study Area (BSA). CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et. seq., for or any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, bank or channel or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are generally subject to notification requirements.

CALIFORNIA ENDANGERED SPECIES ACT

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in take of species of plants or animals listed under CESA, either during construction or over the life of the Project. Under CESA, take is defined as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill." Issuance of an ITP is subject to CEQA documentation. If the Project will impact CESA-listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

ENVIRONMENTAL SETTING

Threatened, endangered, and other special-status species that are known to occur, or have the potential to occur in or near the Project site, include, but are not limited to:

- Central California Coast Coho salmon, Evolutionarily Significant Unit (ESU) (*Oncorhynchus kisutch*), SE, FE

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- Foothill yellow-legged frog (*Rana boylei*, West/Central Coast clade), SE
- California red-legged frog (*Rana draytonii*), SSC, FT
- Townsend's big-eared bat (*Corynorhinus townsendii*), SSC
- Nesting birds

FE = Federally Endangered; FT = Federally Threatened; FC = Federal Candidate Species; SE = State Endangered; SFP = State Fully Protected; SSC = State Species of Special Concern

CDFW recommends that prior to Project implementation surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: <https://www.wildlife.ca.gov/Conservation/Survey-Protocols>.

COMMENTS AND RECOMMENDATIONS

CDFW acting as a Responsible Agency, has discretionary approval under CESA through issuance of a CESA ITP and LSA Agreement, as well as other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife resources. CDFW would like to thank you for preparing the IS/MND and CDFW recommends the following updates, avoidance and minimization measures be imposed as conditions of Project approval by the lead agency, Caltrans, to ensure all Project-related impacts are mitigated to below a level of significance under CEQA:

COMMENT 1: Project Design Coordination

Issue: Specific engineered drawings and design specification planning sheets should be included in the updated version of the IS/MND and/or provided to the natural resource agencies through continued coordination during the design and permitting process for review and comment.

Recommendation Mitigation Measure 1 – Design Consultation: CDFW recommends incorporation of a condition of approval in the IS/MND to engage in early and continued coordination with the CDFW Conservation Engineering Branch and National Marine Fisheries Service (NMFS) personnel. Early and continued coordination is important to provide the proper review and analysis of the proposed bridge placement, bridge design and channel restoration design to ensure fish passage persists at the two Project locations and the best restoration efforts are achieved.

Comment 2: Filter Fabric Prohibition and Rock Slope Protection

Issue: CDFW considers hardscape, rock slope protection (RSP) and filter fabric placement permanent impacts to bed, bank, channel and riparian habitat. In most circumstances CDFW prohibits the installation of filter fabric within the bed, bank, channel, and riparian habitat of a given creek system. The prohibition is due to the

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materials inhibition of root growth and development, potential to girdle large woody vegetation and issues with plastic pollution as the material breaks down over time into the natural environment.

Recommendation Mitigation Measure 1 – Filter Fabric Prohibition

The Project should not install geo-textile material or synthetic filter fabric of any kind in any portion of the Project(s). CDFW recommends the use of alternative non-synthetic material such as granular filter design in lieu of synthetic filter fabric. This is a layer of fine crushed, gravel that provides similar function as synthetic filter fabric. See the Federal Highway Administrations' Hydraulic Engineering Circular No. 23 (HEC-23) - Bridge Scour and Stream Instability Volume 2 for design guidance on granular filter designs. See the Federal Highway Administrations Hydraulic Engineering Circular No. 23 (HEC-23) Volume 1.

Recommendation Mitigation Measure 2 – Vegetated Rock Slope Protection

If RSP must be utilized, CDFW recommends that RSP fields are constructed with suitable non-erodible materials that will withstand typical yearly wash out. Only clean material such as, rock riprap that is free of trash, debris and deleterious material will be used as bank stabilization. RSP should be un-grouted rock slope protection free of cementitious material and back filled with native soil. Any energy dissipater materials should consist of clean rock, competent for the application, sized and properly installed to resist washout. Voids between rocks should be planted with riparian species native to the area including but not limited to woody vegetation. The native plantings should occur within the sections of any proposed RSP fields that will not be permanently shaded by the shadow of the bridge. See the NCHRP Report-544 Environmentally Sensitive Channel and Bank Protection Measures for design details of vegetated RSP.

COMMENT 3: Temporary Creek Diversion System Pipe Material

Issue: Page 15 of the IS/MND notes the need for a temporary diversion system but does not specify the material of the pipe to be utilized. Due to the location of this Project in Fire Hazard Severity Zones designated as high to very high by the California Department of Forestry and Fire Protection, there is a potential for fire to reach this site in upcoming seasons. Any plastic-material based diversion pipe in the diversion system would therefore melt or burn in the event of a catastrophic fire. The melting or burning of the plastic diversion pipe could create additional significant impacts through toxins being released into the creek system(s) or from the inability to properly remove all the melted material from the creek.

Recommendation: CDFW recommends the temporary creek diversion system is designed to utilize a corrugated metal pipe-based material that is not plastic or any derivate of such a material. Any permanent drainage system designed to utilize plastic-based material pipes should also be replaced with corrugated metal pipe or concrete reinforced metal pipe to avoid melting or burning during extreme fire conditions.

COMMENT 4: Light Impact Analysis and Discussion

Issue: Currently the two proposed locations have no artificial lighting sources along the SR-9 state highway system alignment. CDFW strongly recommends prohibiting the installation of any new artificial light sources within the Project limits. Artificial lighting often results in light pollution, which has the potential to significantly and adversely affect biological resources. Unlike the natural brightness created by the monthly cycle of the moon, the permanent and continuously powered lighting fixtures create an unnatural light regime that produces a constant light output. Continuous light output for 365 days a year can have a cumulatively significant impact on fish and wildlife populations.

Evidence the impact would be significant: Night lighting can disrupt the circadian rhythms of fish and wildlife species. Many wildlife species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Artificial night lighting has also been found to impact juvenile salmonid overwintering success by delaying the emergence of salmonids from benthic refugia and reducing their ability to feed during the winter (Contor and Griffith 1995).

Recommendation: The IS/MND should describe, if applicable, the type, quantity, location and specification outputs (in kelvin-scale and/or nanometers) of all proposed new and replacement artificial lighting installations. To accomplish this, the draft IS/MND should provide an analysis of the current lighting regime known to be present on site as well as an analysis of the proposed changes in the lighting regime that will occur as a result of new or replacement lighting installations through the development and comparison of Isolux diagrams. The Isolux diagrams should illustrate the area and intensity over which artificial lighting will create additional light impacts over the natural landscape or aquatic habitat along the Project corridor. The draft IS/MND should also include a discussion in the Biological Resources section of the potentially significant impacts that could be created by increased permanent light installations or replacements or new installations to determine the extent of the impacts to rare, threatened, endangered, nocturnal and migratory species known to occur within the Project vicinity. If new or replacement artificial lighting sources are to be installed CDFW recommends incorporating the following avoidance and minimization measures as conditions of approval to reduce potentially significant impacts:

Recommended Mitigation Measure 1 – Light Impact Assessment and Avoidance: CDFW recommends the lead agency submit to natural resource agencies, 30 days prior to the initiation of construction Isolux Diagrams that note current light levels present during Pre-Project conditions and the predicted Project light levels that will be created upon completion of the Project. Within 60 days of Project completion the lead agency should conduct a ground survey that compares predicated light levels with actual light levels achieved upon completion of the Project through comparison of Isolux diagrams. If an increase from the projected levels to the actual levels is discovered, additional avoidance, minimization or mitigation measures may be required in coordination with

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the natural resource agencies.

Recommended Mitigation Measure 2 – Light Output Limits: All LED's or bulbs installed as a result of the Project should be rated to emit or produce light at or under 2,700 kelvin that results in the output of a warm white color spectrum.

Recommended Mitigation Measure 3 – Vehicle Light Barriers: Solid concrete barriers at a minimum height of 3.5 feet should be installed in areas where they have the potential to reduce illumination from overhead lights and from vehicle lights into areas outside of the roadway. Barriers should only be utilized as a light pollution minimization measure if they do not create a significant barrier to wildlife movement. Additional barrier types should be employed when feasible, such as privacy slats into the spacing of cyclone fencing to create light barriers for areas outside the roadway.

Recommended Mitigation Measure 4 – Reflective Signs and Road Striping: Retro-reflectivity of signs and road striping should be implemented throughout the Project to increase visibility of roads to drivers and reduce the need for electrical lighting. Reflective highway markers have also been proven effective to reduce raptor collisions on highways in California's central valley if installed along highway verges and medians.

Recommended Mitigation Measure 5 – Light Pole Modifications and Shielding: All light poles or sources of illumination that are new or replacement installations should be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat with the Project corridor in coordination with the natural resource agencies. In addition, the light pole arm length and mast heights should be modified to site-specific conditions to reduce excessive light spillage into natural landscapes or aquatic habitat within the Project corridor. In areas with sensitive natural landscapes or aquatic habitat the lead agency should also analyze and determine in the updated IS/MND if placing the light poles at non-standard intervals has the potential to further reduce the potential for excessive light pollution caused by decreasing the number of light output sources in sensitive areas.

CONCLUSION

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California's fish and wildlife resources. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

Questions regarding this letter or further coordination should be directed to Mr. Robert Stanley, Senior Environmental Scientist (Specialist), at (707) 428-2093 or Robert.Stanley@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

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