

State of California
Department of Fish and Wildlife

Governor's Office of Planning & Research



Memorandum

Oct 20 2022

STATE CLEARINGHOUSE

Date: October 18, 2022

To: Jaycee Azevedo
California Department of Transportation
District 10
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DocuSigned by:

Erin Chappell

From: Erin Chappell, Regional Manager
California Department of Fish and Wildlife-Bay Delta Region, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534

Subject: State Route – 4 River Bridge Maintenance Project, SCH No. 2022090379, San Joaquin and Contra Costa County

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Completion (NOC) for the draft Initial Study with Proposed Negative Declaration (IS/ND) for the State Route – 4 (SR-4) River Bridge Maintenance Project (Project), pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW is submitting comments on the draft IS/ND 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 California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority. (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by

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.

Jaycee Azevedo
California Department of Transportation

2

October 18, 2022

State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code. Pursuant to our jurisdiction, CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT LOCATION AND DESCRIPTION

Caltrans proposes to preserve the Old River Bridge (Number 29-0045) on post mile 0.01 at the San Joaquin and Contra Costa County line on SR-4. Preservation of the bridge will include a polyester concrete overlay and painting the bridge. The old timber waling and the fenders on the north side of Pier 3 will be replaced, and the south side of Pier 2 will be supported with new high-density polyethylene walers mounted to the existing timber piles. An abandoned Caltrans-owned one-car garage on the southwest levee will be removed.

REGULATORY AUTHORITY

Lake and Streambed Alteration Agreement Notification

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, channel, or bank (including associated riparian or wetland resources); 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.

Fully Protected Species

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except for collecting these species for necessary scientific research and relocation of a fully protected bird species for the protection of livestock. Take of any fully protected species is prohibited, and CDFW cannot authorize their take in association with a general project except under the provisions of a Natural Communities Conservation Plan (NCCP), 2081.7 or a Memorandum of Understanding for scientific research, including efforts to recover fully protected, threatened or endangered species. "Scientific Research" does not include an action taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code.

California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. 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. CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, and CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code, section 2080. More information on the CESA permitting process can be found on the CDFW website at <https://www.wildlife.ca.gov/Conservation/CESA>.

COMMENTS AND RECOMMENDATIONS

COMMENT 1: Project Impacts to Old River

Issue: The IS/ND indicates Project activities could affect up to 0.33 acre of the Old River during the installation of temporary scaffolding to create the bridge containment system but the Project Description does not indicate where these impacts will occur. The Project is subject to notification under Fish and Game Code section 1600 et. seq. CDFW will require additional information to process the notification.

Recommendation 1 – Provide a Detailed Project Map: Provide a detailed map of the extent and location of Project activities that will occur within the bed, bank, channel and riparian habitat of Old River.

Recommendation 2 – Clarify Project Impacts to Old River: Quantify the temporary and permanent impacts to the bed, bank, channel and riparian habitat of Old River and of any associated tributaries. Examples of impacts that should be quantified include vegetation clearing, grading, excavation, de-watering and/or bank armoring.

Recommendation 3 – Provide Additional Night-Work Information: Identify the proposed number of nights necessary to complete work.

Recommendation 4 – Planning for Temporary and Permanent Impacts to Old River: The restoration and enhancement plan should detail the areas for restoration and enhancement and include proposed actions, monitoring plans, success criteria, and plan for corrective actions. Additionally, the area where the currently existing one-car garage is proposed for demolition should be included in the plan and could be used to offset permanent impacts.

COMMENT 2 – Bridge Runoff Capture Systems

Issue: The Project could increase impervious surfaces at the Project site that can cause concentrated run-off into Old River. The Project currently proposes no system to contain roadway runoff before it enters Old River. Impervious surfaces, stormwater systems, and storm drain outfalls have the potential to significantly affect fish and wildlife

resources from polluted water and by altering the hydrograph of natural streamflow patterns via concentrated run-off that enters creeks and systems from the road.

Evidence the impact would be significant: Urbanization (e.g., impervious surfaces, stormwater systems, storm drain outfalls) can modify natural streamflow patterns by increasing the magnitude and frequency of high flow events and storm flows (Hollis 1975, Konrad and Booth 2005). A review by Eisler (1987) indicates elevated incidence of tumors and hyperplastic diseases, and some circumstantial evidence about cancers, in fish in areas with high sediment Polycyclic Aromatic Hydrocarbon (PAH) levels. Arsenic, cadmium, chromium, lead, mercury, nickel, and zinc have been detected in streambed sediments and Stormwater Runoff from Bridges in the tissue of fish, indicating bioaccumulation of these metals in the environment (MacCoy and Black, 1998). Lead concentrations in benthic insects, and nickel and cadmium levels in certain fish were found to be related to traffic density and sediment levels of these constituents (Van Hassel, 1980). Acute toxicity and mortality have also been tied to immediate road runoff from a compound occurring in tires, 6PPD-Quinnone (Tial, 2021).

Recommendation 1 – Bridge Capture Runoff System: The Project design should include a bridge capture runoff system to prevent direct runoff of untreated water on the bridge decks from entering Old River. The bridge runoff system should direct runoff to a land-based bio-filtration system or a mechanical filter system to avoid, minimize and treat any discharge water.

Recommendation 2 – Bridge Material Capture System: The Project Description should include additional details about the impacts created by the temporary scaffold to bed, bank, channel or riparian habitat and provide a detailed description of the additional avoidance and minimization measures to be employed that will prevent material from entering the Old River.

Recommended Measure – Concrete Monitoring: A concrete monitor shall be on-site during all concrete pours that have the potential for material to enter Old River. The monitor shall have the authority to halt construction if necessary to prevent pollution. No pouring of concrete shall occur at night. If curing compounds are proposed on-site, they shall be approved in advance by CDFW and follow the curing periods on the product label. A concrete pour monitoring log shall also be kept that notes the date, time, type of concrete and quantity of concrete installed. A Concrete spill plan shall also be developed in advance of construction for CDFW review and approval.

COMMENT 3: Light Impact Analysis and Discussion

Issue: Clarify if any new permanent light sources will be installed or if any existing lighting sources will be replaced with modern lighting systems. The location surrounding the current Old River Bridge has one instance of an overhead light and other minor lighting sources associated with safe navigation of the bridge. Artificial light spillage beyond the prism of the roadway into natural areas may result in a potentially significant

impacts through substantial degradation of the quality of the environment. Artificial light pollution also has the potential to significantly and adversely affect biological resources and the habitat that supports them. 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 also have cumulatively significant impacts on fish and wildlife populations.

Evidence the impact would be significant: Artificial night lighting can disrupt the circadian rhythms of many wildlife species. Many 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). For nocturnally migrating birds, direct mortality as a result of collisions with anthropogenic structures due to attraction to light (Gauthreux, 2006) is another direct effect of artificial light pollution. There are also more subtle effects, such as disrupted orientation (Poot et al. 2008) and changes in habitat selection (McLaren et al. 2018). There is also growing evidence that light pollution alters behavior at regional scales, with migrants occupying urban centers at higher-than-expected rates as a function of urban illumination (La Sorte et al. 2021). While artificial light pollution can act as an attractant at both regional (La Sorte et al. 2021) and local (Van Doren et al. 2017) scales, there is also evidence of migrating birds avoiding strongly lit areas when selecting critical resting sites needed to rebuild energy stores (McLaren et al. 2018).

Recommendation: Due to the high potential for songbirds, migratory birds, salmonids and nocturnally active State listed and special-status species, CDFW recommends no lighting is installed or updated as part of or as a result of Project in order to avoid potentially significant impacts to biological resources from artificial lighting. If lighting is proposed for installation or replacement an analysis of the proposed light output should be included in the IS/ND.

Recommended Measure 1 – Habitat Compensation: For Project elements that require artificial lighting, compensatory mitigation shall be provided for all areas supporting fish and wildlife affected by new or increased light output.

Recommended Measure 2 – Light Output Analysis: 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 shall be analyzed in the IS/ND. An Isolux Diagram provides the contours of illuminance over the surface of the land and water as points of illuminance in footcandles or lux. If an increase in light output from current levels to the projected future levels is evident additional avoidance, minimization or mitigation shall be developed in coordination with the natural resource agencies to offset indirect impacts to special-status species. Within 60 days of Project completion

Jaycee Azevedo
California Department of Transportation

6

October 18, 2022

the lead agency shall conduct a ground survey that compares projected future 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 also be required in coordination with the natural resource agencies. This analysis should be conducted across all potential alternatives and compared in table and map format.

Recommended Measure 3 – Light Output Limits: All LED's or bulbs installed as a result of the Project shall be rated to emit or produce light at or under 2700 kelvin that results in the output of a warm white color spectrum.

Recommended Measure 4 – Vehicle Light Barriers: Solid 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 Measure 5 – Reflective Signs and Road Striping: Retro-reflectivity of signs and road striping should be implemented throughout the Project to reduce the need for electrical lighting.

Recommended Measure 6 – Light Pole Modifications and Shielding: All new or replacement light poles or sources of illumination shall be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat within the Project corridor in coordination with CDFW. 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 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.

COMMENT 4: Swainson's Hawk Protocol Surveys and Assessment

Issue: Measures proposed in the Biological Resources section for Swainson's hawk of the IS/ND may not be sufficient to avoid potentially significant impacts to Swainson's hawk, a state threatened species. The California Natural Diversity Database (CNDDDB) indicates a minimum of three occurrences within the recommended survey protocol area. One nest occurrence is within the 0.5-mile avoidance buffer as are suitable nesting trees.

Recommendation 1 – Swainson's Hawk Protocol Surveys and Assessments: Follow the Swainson's Hawk Technical Advisory Committee's (TAC) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central*

Jaycee Azevedo
California Department of Transportation

7

October 18, 2022

Valley (2000) <https://wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds> survey methods and start early in the nesting season (late March to early April) in order to maximize the likelihood of detecting an active nest.

Recommendation 2 – Swainson’s Hawk Nest Buffers: If an active nest is found during surveys, avoid all Project-related disturbance during the Swainson’s hawk nesting season within a minimum of 0.25 miles and up to 0.5 miles from an active nest, depending on site-specific conditions. CDFW considers a nest active if it has been occupied once in the previous five years. Please refer to the CDFW’s Staff Report regarding Mitigation for Impacts to Swainson’s Hawks (*Buteo swainsoni*) in the Central Valley of California available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83992&inline> if impacts cannot be avoided.

Recommendation 3 – Swainson’s Hawk Take Prohibition: If “take” of Swainson’s hawk or any other species listed under CESA cannot be avoided either during Project activities or over the life of the Project, a CESA permit must be obtained (pursuant to Fish and Game Code Section 2080 *et seq.*). Issuance of a CESA permit is subject to CEQA documentation; therefore, the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the proposed Project will impact any 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. More information on the CESA permitting process can be found on the CDFW website at <https://wildlife.ca.gov/Conservation/CESA>.

COMMENT 5: BIO 14 – Nesting Bird and Roosting Bat Exclusion Measures

Issue: The IS/ND indicates that bird exclusion measures will be employed but does not describe the exclusion methods. If exclusion netting is used, CDFW is concerned this could result in ensnaring of individuals and unintended impacts to wildlife. Exclusion netting is prone to failure and requires daily monitoring, upkeep and maintenance to function properly.

Recommendation: Exclusionary netting should not be used to exclude bird and bats. Alternative measures that incorporate surveys and seasonal avoidance should be employed.

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.

Jaycee Azevedo
California Department of Transportation

8

October 18, 2022

Questions regarding this letter or further coordination should be directed to Robert Stanley, Senior Environmental Scientist (Specialist), at (707) 339-6534 or Robert.Stanley@wildlife.ca.gov; or Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

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Jaycee Azevedo
California Department of Transportation

9

October 18, 2022

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