

State of California
Department of Fish and Wildlife



Memorandum

Date: July 28, 2022

To: Krishma Dutta
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Governor's Office of Planning & Research

JUL 29 2022

STATE CLEARINGHOUSE

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: Putah Creek Bridge Rehabilitation Project, Notice of Completion for Draft Initial Study with Proposed Negative Declaration, SCH No. 2022070147, Napa County

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Completion (NOC) for the Putah Creek Bridge Rehabilitation Project (Project), Initial Study with proposed Negative Declaration (IS/ND) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW is submitting comments on the 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 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 State law of any species protected under the California Endangered Species Act (CESA) (Fish &

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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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

The Project is located at Putah Creek Bridge on State Route 128 (SR-128), at Post Mile (PM) 0.72-0.73 in Solano County, California. Caltrans proposes to widen the existing bridge and upgrade the existing bridge structure to accommodate new, larger rails. The Project will also include upgrades of the approach rails, installation of new drainage systems, resurfacing of the bridge deck by applying a polyester concrete overlay, and upgrades to the signage and roadway striping to current standards.

The upgrade of the existing railings to the current Manual for Assessing Safety Hardware (MASH) ST-75 guardrail standard will involve demolishing the existing overhang along both sides of the bridge, constructing new overhangs, forming and casting the new ST-75 rails, and widening and upgrading the bridge structure to accommodate the larger bridge rail. To support the added weight of the new rails and overhang, additional modifications to the bridge superstructure will be necessary. These include adding concrete struts that extend from the outermost longitudinal girders to the outer edge of the overhang and constructing intermediate diaphragms between the middle and outermost longitudinal girders. Caltrans also proposes to replace the sliding joint plate on two of the bridge piers.

Signage upgrades include curve warning signs that will be installed on each end of the bridge and roadway striping will be completed within the Project to meet current Caltrans design standards. The Project proposes drainage improvements by constructing a down drain system with a drainage inlet.

Two staging areas, one on the southeast side of the bridge and one under the north side of the bridge are proposed. The southern staging area is within the Putah Creek Wildlife Area will use the existing dirt parking lot to store materials and equipment. The northern staging area will be under the north side of the bridge on a mostly cleared dirt area currently used as a private campground. Two access roads will be needed for the construction of the proposed Project. On the southeast side of the bridge, an access road will be constructed for crane pad access from the proposed staging area within the Putah Creek Wildlife Area. On the north side of the bridge, the contractor will use the private campground's existing dirt and gravel roadway to access the crane pad and northern staging area.

To construct the access road on the south side of the bridge, the contractor will need to clear and grub vegetation, including trees. Up to 17 trees may be removed for access, to create a 15-foot-wide path toward the creek. Soil within this 15-foot-wide path will be compacted with construction equipment to create a stable surface that would safely facilitate the movement of personnel and equipment. On the north side of the bridge,

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some minor excavation under the bridge will be necessary to provide additional clearance for a truck mounted crane.

REGULATORY AUTHORITY

Lake and Streambed Alteration Agreement (LSA) 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>.

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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 NOC for the IS/ND. CDFW recommends the following updates, avoidance and minimization measures be incorporated into the IS/ND as conditions of Project approval by the lead agency, Caltrans, to ensure all Project-related impacts are reduced below a level of significance under CEQA:

COMMENT 1: Project Design Analysis and Coordination

Recommendation: CDFW recommends early design coordination between the lead agency and CDFW Conservation Engineering staff, Wildlife and Lands staff and Habitat Conservation staff, including before Project design commences:

Recommendation Mitigation Measure 1 – Design Coordination: Early coordination with CDFW Habitat Conservation Program staff and the CDFW Conservation Engineering Branch shall include review and analysis of any proposed staging, access roads, structures or Project elements with the potential to impact fish and wildlife resources. CDFW Conservation Engineering Branch shall be provided engineered drawings and design specification planning sheets during the initial design process, prior to design selection and re-initiating design consultation at 30% design at minimum and through the permitting process for review and comment as identified in the Interagency Agreement (Agreement Number 43A0398).

Recommendation Mitigation Measure 2 – Access and Staging Coordination: All activities proposed to occur within the Putah Creek Wildlife Area shall be reviewed and accepted by the CDFW Wildlife and Lands Program prior to the initiation of construction. All activities shall be outlined in a Letter of Permission request to the Wildlife and Lands Program. The Section 4(f) de minimis impact determination request associated with the Project must be submitted to Habitat Conservation and the Wildlife and Lands Program, as the California Department of Fish and Wildlife is the agency with jurisdiction over the Putah Creek Wildlife Area and subsequent activities within. Section 4(f) of the Department of Transportation Act (49 USC 303) regulates compliance with Section 4(f) properties include Publicly-Owned Public Parks, Recreational Areas, or Wildlife or Waterfowl Refuges; Historic sites on or eligible for the *National Register of Historic Places* and archaeological sites on or eligible for the *National Register of Historic Places* and which warrant preservation in place as determined by the Department and the official(s) with jurisdiction.

Recommendation Mitigation Measure 3 – Stream Protection Plan: As part of early the early coordination process, the lead agency shall develop a stream protection plan to prevent deleterious material and debris from entering the creek. The current

language noted on page 2-3 should be updated to remove reference to use of any netting as a form of a debris catchment system. The netting may act to ensnare or tangle birds or bats and is not recommended by CDFW. A solid fabric catchment system or lumber catwalk is the preferred alternative to netting.

COMMENT 2 – Bridge Run-off to Putah Creek

Issue: The Project could increase impervious surfaces at the Project site that can cause concentrated run-off to Putah Creek. 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.

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: CDFW recommends the Project design be updated to include a bridge capture runoff system to prevent direct runoff of untreated water on the bridge deck from entering Putah Creek. The bridge runoff system should direct runoff to a land-based bio-filtration system to avoid, minimize and treat any discharge water to Putah Creek (URS, 2012).

Recommendation Mitigation Measure 2 – Mitigation Planning: CDFW strongly recommends that the lead agency develop a mitigation plan in coordination with CDFW for any Project impacts that cannot be avoided that will be subject to LSA permitting and include that plan as part of the updated IS/ND. The mitigation plan should include in detail any proposed on and/or off-site mitigation needs necessary to compensate for net-loss of stream resources including but not limited to hardscape materials and geotextile fabric within the bed, bank or channel of a stream, loss of riparian vegetation and mature trees and expansion of existing infrastructure footprint(s). CDFW recommends proposed mitigation plan(s) include details such as mitigation location(s), proposed actions, monitoring, success criteria and any corrective actions.

COMMENT 3: Light Impact Analysis and Discussion

Issue: The proposed Project location does not currently contain any overhead or artificial light sources including informational signs, warning signals, flashing beacons or bridge luminaries. Any new Project 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 bats, songbirds, migratory birds, salmonids and nocturnally active State listed and special status species CDFW recommends that no artificial light sources are installed as part of the Project in order to avoid potentially significant impacts to biological resources.

Recommended Measure 1 – Habitat Compensation: For Project elements that require new or increased artificial lighting, compensatory mitigation shall be provided to offset any potentially significant impacts from lighting to fish and/or wildlife habitat.

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 included in the IS/ND. If an increase in light output from current levels to the projected future levels is evident those impacts should be identified in the updated MND and the additional avoidance,

minimization and/or mitigation should be implemented in consultation with CDFW. Within 60 days of Project completion 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: If new or increased artificial lighting cannot be avoided, any 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 should be installed at a minimum height of 3.5 feet in areas where illumination from overhead and vehicle lights can spill into areas outside of the roadway. Barriers shall only be utilized as a light pollution minimization measure if they do not create a significant barrier to wildlife movement. Additional barrier types shall 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 shall 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 shall 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 shall 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: Bat Assessment and Avoidance

Issue: The Project has potential to result in permanent and temporary impacts to a verified maternal roosting colony of Mexican/Brazilian free-tail bats in the existing bridge at Putah Creek. Caltrans identifies the presence of this maternal colony on page 3-21 of the IS/ND. The potential permanent loss of roosting area within the bridge structure used for roosting through bridge modification along with the temporal loss of access to

these roosting areas is likely to create a potentially significant impact to bats at this location.

Evidence the impact would be significant: Ninety three percent of the rare bats in California either use or are likely to use bridges. A total of eighteen species use bridges in one way or another (Erickson, 2002). According to the California National Diversity Database (CNDDDB), potentially suitable habitat exists within the Project for species such as; pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*) and Mexican/Brazilian free-tailed bat (*Tadarida brasiliensis*) (CNDDDB, 2022). Pallid bats and many myotis species utilize bridges as day roosts, night roosts and are commonly found on bridges (Erickson, 2002). Modification of bridges and removal of up to 16 trees may potentially eliminate the bat community or reduce the number of, or restrict the range of bats at this site.

Recommended Mitigation Measure 1: Bat Habitat Assessment: A qualified biologist shall conduct a habitat assessment within the Project limits for suitable bat roosting habitat. The habitat assessment shall include a visual inspection, sound analysis survey and night roost exit survey. The surveys should focus on the bridge and features within 200 feet of the work area for potential roosting features including trees, crevices, portholes, expansion joints and hollow areas (bats need not be present). The IS/ND should also include a section that discusses the results of the suitable habitat assessment and if any bats or signs of bats (feces or staining at entry/exit points) are discovered. The surveys shall occur over two seasons in advance of Project initiation.

Recommended Mitigation Measure 2: Bat Habitat Monitoring: If potentially suitable bat roosting habitat is determined to be present a qualified biologist shall conduct focused surveys at the bridge utilizing night-exit survey methods, sound analyzation equipment methods and visual inspection from March 1 to April 15 or September to October 15 prior to construction activities. If the focused survey reveals the presence of roosting bats, then the appropriate exclusionary or avoidance measures will be implemented prior to construction during the period between March 1 to April 15 or September 11 to October 15. Potential avoidance methods may include temporary, exclusionary blocking, one way-doors or filling potential cavities with foam. Methods may also include visual monitoring and staging of work at different ends of the Project to avoid work during critical periods of the bat life cycle to allow roosting habitat to persist undisturbed throughout the course of construction. Exclusion netting or adhesive roll material shall not be used as exclusion methods. If presence/absence surveys indicate bat occupancy, then construction shall be limited from March 1 through April 15 and/or September 1 through October 15.

Recommended Mitigation Measure 3: Permanent and Temporary Bat Structures: Due to the known presence of a maternal colony the lead agency shall incorporate permanent bat roosting structures into the design of the new bridge in consultation with CDFW. Temporary structures shall also be installed at the site to provide habitat during the timeframe when access to the bridge is excluded until construction is complete.

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Recommended Mitigation Measure 4: Temporary Bat Exclusion Plan: Due to the open diaphragms and open support design of the Putah Creek Bridge temporary exclusion will be complex and the traditional methods of exclusion such as foam inserts and one-way doors may not be successful at this location. Therefore, it is strongly recommended that the lead agency consult with a highly qualified bat biologist to develop a site-specific bat exclusion plan. This plan should be submitted to CDFW for review, comment and subsequent approval well in advance of construction and Notification for any discretionary approvals such as an LSA. The plan may need to incorporate a phased work approach and has the potential to develop the project over multiple seasons to avoid the most critical periods of the bat life cycle. Other options may include the use of heavy plywood structures to act as the exclusion material. Please reference the *Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions Manual* (H.T. Harvey, 2019) for more information.

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 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.

cc: State Clearinghouse #202207047

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