

State of California
Department of Fish and Wildlife



Memorandum

Date: September 9, 2021

To: Mr. Nathan Roberts
California Department of Transportation
District 4; Environmental Planning
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Governor's Office of Planning & Research

September 10 2021

STATE CLEARINGHOUSE

DocuSigned by:

Stephanie Fong

From: Ms. CFA47D7E8D234E1 Stephanie Fong, Acting Regional Manager
California Department of Fish and Wildlife-Bay Delta Region, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534

Subject: Hopper Slough Bridge Replacement Project, Notice of Preparation, SCH No. 2021080191, Napa County

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the Hopper Slough Bridge Replacement Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW is submitting comments on the draft EIR 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) Permit, the Native Plant Protection Act Permit, the Lake and Streambed Alteration (LSA) Agreement 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 replacement of the Hopper Slough Bridge (Bridge No. 21-0019) on State Route (SR) 28 at Post Mile (PM) 5.12 in Napa County, California. The Lead Agency for the Project proposes to replace the existing bridge with a bridge in the same location and route upon completion. The Project limits include space for equipment storage, access to the slough and space for equipment to demolish and construct the new structure.

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.

Mr. Nathan Roberts
California Department of Transportation

2

September 9, 2021

REGULATORY AUTHORITY

Lake and Streambed Alteration Agreement

The Project has the potential to impact resources including mainstems, tributaries and floodplains associated with Hopper Slough known to occur within the identified limits of the Project that has direct connection to Bale Slough and the Napa River. Please be advised that the proposed Project may be subject to LSA Notification for impacts to drainage systems that connect to tributaries of main stem creeks and tributaries that occur within the Project 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, 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 subject to notification requirements.

Fish and Game Code 5901. Except as otherwise provided in this code, it is unlawful to construct or maintain in any stream in Districts 1, 1^{3/8}, 1^{1/2}, 1^{7/8}, 2, 2^{1/4}, 2^{1/2}, 2^{3/4}, 3, 3^{1/2}, 4, 4^{1/8}, 4^{1/2}, 4^{3/4}, 11, 12, 13, 23, and 25, any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream. Fish are defined as a wild fish, mollusk, crustacean, invertebrate, amphibian, or part, spawn, or ovum of any of those animals (Fish and Game Code section 45).

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>.

ENVIRONMENTAL SETTING

Sufficient information regarding the environmental setting is necessary to understand the Project, and its alternative’s (if applicable), significant impacts on the environment (CEQA Guidelines, §§15125 and 15360). CDFW recommends that the CEQA document

Mr. Nathan Roberts
California Department of Transportation

3

September 9, 2021

prepared for the Project provide baseline habitat assessments for special-status plant, fish, and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, or endangered species (CEQA Guidelines, §15380). 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:

Common Name	Scientific Name	Status
Steelhead - Central California Coast – DPS	<i>Oncorhynchus mykiss</i>	FT
Western pond turtle	<i>Emys marmorata</i>	SSC
Western mastiff bat	<i>Eumops perotis</i>	
Pallid bat	<i>Antrozous pallidus</i>	
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>	
Western ridged mussel	<i>Gonidea anguilata</i>	S1, S2
Notes: FT = Federally Threatened; SSC = State Species of Special Concern; S1, S2 = State Rank, Critically Imperiled, Imperiled, DPS = Distinct Population Segment		

Habitat descriptions and species profiles should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, and findings from “positive occurrence” databases such as California Natural Diversity Database (CNDDDB). Based on the data and information from the habitat assessment, the CEQA document can then adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species noted in this comment letter 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 Incidental Take Permit 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 NOP for the draft EIR and CDFW recommends the following updates, avoidance and minimization measures

Mr. Nathan Roberts
California Department of Transportation

4

September 9, 2021

be imposed 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

Issue: The Project may have the potential to cause potentially significant impacts to fish and wildlife resources including but not limited to the sections noted in this memorandum.

Recommendation: In order to avoid or reduce those potentially significant impacts below the threshold of significance, CDFW recommends early coordination.

CDFW also recommends the following is incorporated into the subsequent EIR as conditions of approval:

Recommendation Mitigation Measure 1 – Design Coordination: CDFW recommends incorporation of a condition of approval in the subsequent EIR to engage in early and continued coordination before design commences with CDFW. Early coordination with Habitat Conservation and the CDFW Conservation Engineering Branch is recommended to provide review and analysis of any proposed structures or Project elements with the potential to impact fish and wildlife resources. CDFW Conservation Engineering Branch should 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.

Recommendation Mitigation Measure 2 – Bridge Design References: CDFW recommends utilizing the design principles outlined in the California Salmonid Stream Habitat Restoration Manual, Part XII (CDFW, 2009) and NOAA Fisheries Service Guidelines for Salmonid Passage at Stream Crossings (NMFS, 2001) into the bridge design. CDFW strongly recommends incorporation of design concepts such as spans that are at minimum 1.5 times greater than the channel width to allow natural stream flow and sedimentation processes to continue for long term dynamic channel stability.

COMMENT 2: Fish Passage Assessment and Bridge Design

Issue: Senate Bill 857 (SB-857), which amended Fish and Game Code 5901 and added section 156 to the Streets and Highways Code states in section 156.3, "For any project using state or federal transportation funds programmed after January 1, 2006, [Caltrans] shall insure that, if the project affects a stream crossing on a stream where anadromous fish are, or historically were, found, an assessment of potential barriers to fish passage is done prior to commencing project design. [Caltrans] shall submit the assessment to the [Department of Fish and Wildlife] and add it to the CALFISH database. If any structural barrier to passage exists, remediation of the problem shall be designed into the project by the implementing agency. New projects shall be

Mr. Nathan Roberts
California Department of Transportation

5

September 9, 2021

constructed so that they do not present a barrier to fish passage. When barriers to fish passage are being addressed, plans and projects shall be developed in consultation with the [Department of Fish and Wildlife].

The current Project as described in the NOP notes the construction of a three-span-bridge, but it is unclear from the Project Description if the structural supports of the bridge will be located within bed, bank or channel. It is also unclear if the spans will be designed in accordance with the CDFW Fish Passage Design Manual (CDFW, 2009) to be 1.5 times the bankfull width.

Evidence the impact would be significant: The bridge at Hopper Slough does not represent a current barrier to fish passage and has not been identified as such in the CALFISH database but does represent a location where anadromous fish were historically found and may still utilize in high flow event years. Historical species include Steelhead – Central California Coast - DPS (CNDDDB, 2021; DS-806). Records identify findings of steelhead within the Bale Slough watershed upstream and downstream of the Inglenook Winery and within reaches of the Napa River that connect to Hopper Slough (Leidy, 2005).

Recommendations: CDFW recommends the Project be constructed so it does not impede passing of fish and aquatic life up and down stream within Hopper Slough. Early coordination is recommended with CDFW Conservation Engineering Branch and CDFW Habitat Conservation as specified in the COMMENT 1: Project Design Analysis and Coordination section of this memorandum.

COMMENT 3: Bat Assessment and Avoidance

Issue: The subsequent EIR should specify an assessment and analysis method that will be used to survey potential bat species that may roost within trees or anthropogenic structures within the Project limits. The proposed work has the potential to result in the removal of an existing bridge and trees that may contain suitable bat roosting habitat such as cracks, crevices or voids. Those cracks, crevices or voids may provide suitable roosting habitat for bats and the loss of access to that habitat may create a potentially significant impacts to bats.

Evidence the impact would be significant: According to CNDDDB, potentially suitable habitat exists within the Project for species such as; pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis*) and Brazilian free-tailed bat (*Tadarida brasiliensis*) (CNDDDB, 2021). Removal of structures and trees may have the potential to degrade the quality of the environment, substantially reduce available bat habitat and reduce a local bat population to below self-sustaining levels (Erickson, 2003). Modification of bridges or other structures may also potentially eliminate a bat community or reduce the number or restrict the range of a rare or endangered bat, this would also be considered a potentially significant impact.

Mr. Nathan Roberts
California Department of Transportation

6

September 9, 2021

Recommendation: To evaluate and avoid potentially significant impacts to bat species, CDFW recommends incorporating the following mitigation measures into the EIR as conditions of approval:

Recommended Mitigation Measure 1 – Bat Habitat Assessment: A qualified biologist should conduct a habitat assessment within the Project limits for suitable bat roosting habitat. The habitat assessment shall include a visual inspection of 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 EIR 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 should occur at least 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 should be limited from March 1 through April 15 and/or September 1 through October 15.

Recommended Mitigation Measure 3 – Bat Structure Incorporation: If active bat roosts are observed at the Project site that will be impacted as a result of Project completion, the lead agency should incorporate bat roosting structures into the design of the new bridge in consultation with CDFW to reduce the potentially significant impact of reducing habitat for fish and wildlife species.

COMMENT 4: Light Impact Analysis and Discussion

Issue: The proposed Project location is situated in a rural environment in Napa County with no currently existing overhead street lighting occurring within the Caltrans right of way. Artificial light spillage beyond the prism of the roadway into natural areas may result in a potentially significant impacts through the 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

Mr. Nathan Roberts
California Department of Transportation

7

September 9, 2021

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). Due to the high potential for presence of songbirds and current lack of artificial lighting CDFW recommends no lighting is installed as a result of Project completion to avoid these potentially significant impacts.

Recommendation: CDFW recommends incorporating the following mitigation measures into the EIR as conditions of approval:

Recommendation Mitigation Measure 1 – Permanent Artificial Light

Restriction: CDFW recommends the lead agency prohibit the installation of permanent artificial lighting throughout the Project limits. This would avoid a potential mandatory finding of significance that may result from substantial degradation in the quality of the environment and through cumulatively considerable significant impacts that will result from unnecessary artificial light pollution.

Recommended Mitigation Measure 2 – 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 remove the need for artificial lighting sources.

COMMENT 5: Western Ridged Mussels (*Gonidea angulate*)

Issue: Western ridged mussels (WRM) are a freshwater mussel known to occur within the Project limits (CNDDDB, 2021). WRM was petitioned for listing under the Federal Endangered Species Act by the Xerxes Society in August of 2020 (Blevin, 2020). Findings were made by the USFWS on July 27, 2021 to engage in a 12-month status review to determine if listing is warranted. The Project may have the potential to cause

Mr. Nathan Roberts
California Department of Transportation

8

September 9, 2021

mortality or habitat degradation to WRM due to bedload burial associated with excess sedimentation created from completion of the Project. The potential also exists for outside construction equipment to bring in invasive aquatic species if not properly cleaned or disinfected.

Evidence the impact would be significant: WRM population have significantly decline in its home range within California. Surveys of 52 historic site in California, (O'Brien, 2019) located only three WRMs. These individuals occurred in only two of the nine historic sites surveyed for the species, and all were older individuals with no evidence of recruitment at the sites (O'Brien, 2019). Due to the potential for the Project to create excess sedimentation, potentially significant impacts from negative water quality may result in mortality or degradation of habitat for WRM.

Recommendation: CDFW recommends incorporating the following mitigation measures into the EIR as conditions of approval.

Recommended Measure 1 – Western Ridged Mussels Assessment and Survey:

CDFW recommends reconnaissance level surveys are conducted prior to construction to assess the presence of freshwater mussels. The reconnaissance effort will determine if there are any mussels that will be impacted and must be avoided or relocated from the Project site. If WRM are found, Caltrans will work with CDFW and other State and Federal agencies to salvage and relocate the freshwater mussels prior to construction. If WRM are located, habitat conditions will also be evaluated downstream of the Project to determine translocation sites.

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) 339-6534 or Robert.Stanley@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

cc: State Clearinghouse #2021080191

REFERENCES

Beiswenger, R. E. 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. *Ecology* 58:98–108.

Mr. Nathan Roberts
California Department of Transportation

9

September 9, 2021

Blevin, etl. al. 2020. Petition to List The Western Ridged Mussel, *Gonidea angulate*, The Xerxes Society. <https://xerxes.org/sites/default/files/publications/20-023.pdf>

California Department of Fish and Wildlife. July, 2009. California Salmonid Stream Habitat Restoration Manual, Part XII.

California Natural Diversity Database. 2021. <https://apps.wildlife.ca.gov/bios/>.

Contor R., Craig, Griffith, J.S. 1995. Nocturnal emergence of juvenile rainbow trout from winter concealment relative to light intensity. *Hydrobiologia* Vol. 299: 179-18.

Erickson, Gregg. 2003. Bats and Bridges Technical Bulletin. California Department of Transportation.

Gauthreraux Jr., S.A., and C.G. Belser. 2006. Effects of artificial night lighting on migrating birds. In *Ecological Consequences of Artificial Night Lighting*, edited by C. Rich and T. Longcore, pp. 67-93. Washington D.C.: Island Press

La Sorte. February, 2021. Seasonal Variation in the effects of artificial light at night on the occurrence of nocturnally migrating birds in urban areas. *Environmental Pollution*, Volume 270.

Leidy, R.A., G.S. Becker, B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, CA

Longcore, T., and C. Rich. 2004. Ecological light pollution - Review. *Frontiers in Ecology and the Environment* 2:191–198.

McLaren, et. al. 2018. Artificial light at night confounds broad-scale habitat use by migrating birds.

Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. *The Condor* 108:130–139.

National Marine Fisheries Service – Southwest Region. September 2001. Guidelines for Salmonid Passage at Stream Crossings.

O'Brien, C. 2019. Freshwater mussel status survey Coastal Range and Central Valley Northern California. Final report to the California Department of Fish and Wildlife.

Poot, H., B. J. Ens, H. de Vries, M. A. H. Donners, M. R. Wernand, and J. M. Marquenie. 2008. Green light for nocturnally migrating birds. *Ecology and Society* 13(2): 47.

Mr. Nathan Roberts
California Department of Transportation

10

September 9, 2021

Stone, E. L., G. Jones, and S. Harris. 2009. Street lighting disturbs commuting bats. *Current Biology* 19:1123–1127. Elsevier Ltd.

U.S. Environmental Protection Agency. 2013a. Aquatic Life Ambient Water Quality Criteria For Ammonia – Freshwater. EPA 822-R-18-002.

U.S. Environmental Protection Agency. 2013b. Flexibilities for States Applying EPA's Ammonia Criteria Recommendations. EPA-820-F-13-001.

Van Doren, et. al. 2017. High Intensity Urban Light Installation Dramatically Alters Nocturnal Bird Migration.