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State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: December 28, 2020

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

Dec 29 2020

STATE CLEARINGHOUSE

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Gregg Erickson
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From: Mr. Gregg Erickson, Regional Manager
California Department of Fish and Wildlife-Bay Delta Region, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534

Subject: Ritchie Creek Bridge Replacement Project for Fish Passage Improvement, Initial Study/Mitigated Negative Declaration, SCH No. 2020120007, Napa County

The California Department of Fish and Wildlife (CDFW) has reviewed the proposed draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Ritchie Creek Bridge Replacement Project for Fish Passage Improvement (Project) pursuant 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) Permit, the Native Plant Protection Act, 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 to replace the existing Ritchie Creek Bridge (Bridge No. 21-0057) with a new bridge at post mile (PM) 33.13 on State Route 29 (SR-29) southeast of the City of Calistoga, in Napa County, California.

The existing Ritchie Creek Bridge is 16.4 feet long and 43.3 feet wide with two 12-foot travel lanes and 8-foot shoulders in each direction with concrete barrier rails. The new bridge would be 35 feet long and 44 feet wide with a 12-foot travel lane and 8-foot

[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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shoulder in each direction. A two-lane temporary detour bridge will be constructed parallel to the northbound lane of the existing bridge to detour traffic during construction. The temporary detour bridge will be constructed outside the Caltrans right of way and would include Type K rails. The Project would also involve temporary relocation of existing aboveground and underground utilities. The Project also proposes to improve fish passage. The existing bridge and the downstream concrete apron associated with a downstream culvert are classified as depth and jump barriers to adult and juvenile salmonids. During low flows, the water depth within Ritchie Creek can become impassable. The depth barrier within the culvert is due to the smooth, wide, and flat surface crossing; the jump barrier is the result of ongoing erosion and scouring over time at the concrete apron just downstream of the bridge crossing.

LAKE AND STREAMBED ALTERATION AGREEMENT

The Project has the potential to impact resources including mainstems, tributaries and floodplains associated with Ritchie 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

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 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

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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:

- California freshwater shrimp (*Syncaris pacifica*), SE, FE
- Foothill yellow-legged frog (*Rana boylii,* northwest clade), SSC
- 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

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 (CNDDB). 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 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: California Freshwater Shrimp (*Syncaris pacifica*)

Issue: Table 1-2 on page 1-17 of the IS/MND does not include in the list of potential authorizations an application for an ITP from CDFW for California freshwater shrimp, a species listed as endangered under CESA. Table 2.3-7; notes that the species has a moderate potential for presence and the Project may affect California freshwater shrimp habitat or is likely to adversely affect. Page 2-112 of the IS/MND, states California freshwater shrimp presence is likely due to on-site habitat conditions.

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Recommendation: CDFW recommends an application for an ITP for California freshwater shrimp is included on Table 1-2 on page 1-17 of the IS/MND in order to authorize take coverage for California freshwater shrimp, a species listed as endangered under CESA. All the species information noted in the IS/MND reinforces the concept that suitable habitat for the species is present on-site and the species may also be present at the Project location. CDFW also recommends incorporating freshwater shrimp habitat structures into the design of the restored channel in the form of willows or other vegetation plantings that can create vegetation that overhangs channel banks as suitable freshwater shrimp habitat.

COMMENT 2: Fish Passage Design Coordination

Issue: Page 1-12 of the IS/MND notes the elements of the fish passage design improvements includes grading 100 feet of the stream channel to a 2.5 percent slope that incorporates a roughened channel. It is unclear if design of the fish passage restoration elements, bridge placement and bridge construction are being developed in coordination with engineers from CDFW Conservation Engineering Branch and the National Marine Fisheries Service (NMFS) in order to ensure the best fish passage design is achieved.

Recommendation: CDFW recommends incorporation of a condition of approval in the IS/MND to engage in early coordination with the CDFW Conservation Engineering Branch and NMFS personnel to provide the proper review and analysis of the proposed bridge placement, bridge design and channel restoration design to accommodate fish passage at Ritchie Creek.

COMMENT 3: Temporary Creek Diversion System Pipe Material

Issue: Page 1-10 of the IS/MND notes the use of a temporary diversion system that incorporates a plastic diversion pipe into the design. 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. There is a high to very high potential for the plastic diversion pipe noted in the diversion system to melt or burn. The melting or burning of the plastic diversion pipe could create unforeseen additional significant impacts through toxins being released into the creek system or from the inability to properly remove all the melted material from the creek. This could over time create unnecessary micro-plastic pollution in the system.

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 utilizing plastic-based material pipes must also be replaced with corrugated metal pipe or concrete reinforced metal pipe to avoid melting during extreme fire conditions.

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COMMENT 4: Light Impact Analysis and Discussion

Issue: The Project could increase artificial lighting through the replacement or installation of new artificial light sources. 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 many 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 the type, quantity, location and specification outputs (in kelvin-scale and/or nanometers) of all proposed new and replacement artificial lighting installations for all proposed build alternatives. A comparison analysis amongst potential alternatives as it pertains to light pollution should be included in the draft IS/MND. 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. 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

The lead agency shall be required to 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 shall 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

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avoidance, minimization or mitigation measures may be required in coordination with the natural resource agencies.

Recommended Mitigation Measure 2: 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 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 into areas outside the roadway.

Recommended Mitigation Measure 4: Reflective Signs and Road Striping

Retro-reflectivity of signs and road stripping 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 shall be 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 wildlife 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.

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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.

cc: State Clearinghouse #2020120007

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