

**State of California
Department of Fish and Wildlife**



M e m o r a n d u m

Date: December 2, 2021

Governor's Office of Planning & Research

To: Ms. Yolanda Rivas
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Dec 02 2021

STATE CLEARINGHOUSE

DocuSigned by:

Stephanie Fong

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

Subject: State Route – 37 Flood Reduction Project, Notice of Preparation of a Draft Environmental Impact Report, SCH No. 2021110045, Marin and Sonoma County

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) for the draft Environmental Impact Report (EIR) for State Route – 37 Flood Reduction 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 permits issued under 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. CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT LOCATION AND DESCRIPTION

Caltrans, as the lead agency, proposes to elevate the existing roadway and reconstruct waterway crossings along State Route 37 (SR-37) to reduce flooding from sea-level rise predicted through 2050. The Project is proposed to occur from postmile (PM) 19.1 on U.S.-101, at the Hanna Ranch Road interchange in Marin County moving east along SR-37 to PM 4.0 to the interchange with SR-121 at Sears Point in Sonoma County. The

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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Project build alternatives would not preclude a future project to address sea level rise over the entire SR-37 corridor from U.S.-101 to Interstate 80 (I-80).

REGULATORY AUTHORITY

Lake and Streambed Alteration Agreement

The Project has the potential to impact stream resources including mainstems, tributaries, drainages and floodplains associated with varied aquatic resource types within the Biological Study Area (BSA) including but not limited to Novato Creek, Tolay Creek, Cheda Creek, Simmons Slough and the Petaluma River. 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. CDFW requires an LSA notification, pursuant to Fish and Game Code § 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.

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 § 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 Guidelines §§ 21001 subd. (c), 21083, 15380, 15064 and 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, § 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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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 purposes. "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.

ENVIRONMENTAL SETTING

Sufficient information regarding the environmental setting is necessary to understand the Project, and its alternative's, 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 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
California red-legged frog	<i>Rana draytonii</i>	SSC, FT
Northern harrier	<i>Circus hudsonius</i>	SSC
White-tailed kite	<i>Elanus leucurus</i>	FP
Short-eared owl	<i>Asio flammeus</i>	SSC
California black rail	<i>Laterallus jamaicensis coturniculus</i>	ST, FP
California Ridgway's rail	<i>Rallus obsoletus obsoletus</i>	SE, FP, FE
Great Blue Heron	<i>Ardea herodias</i>	
Snowy Egret	<i>Egretta thula</i>	
Double crested cormorant	<i>Phalacrocorax auritus</i>	WL
California horned lark	<i>Eremophila alpestris actia</i>	WL
Steelhead - California Central Valley DPS	<i>Oncorhynchus mykiss irideus</i>	FT

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Steelhead - Central California Coast DPS	<i>Oncorhynchus mykiss irideus</i>	FT
Chinook salmon – Central Valley fall run/late fall run ESU	<i>Oncorhynchus tshawytscha</i>	SSC, SC
Chinook Salmon - Spring Run of the Sacramento River Drainage/Central Valley Spring Run	<i>Oncorhynchus tshawytscha</i>	ST, FT
Chinook Salmon - Winter Run	<i>Oncorhynchus tshawytscha</i>	SE
Longfin smelt	<i>Sprinchus thaleichthys</i>	ST, FC
Delta smelt	<i>Hypomesus transpacificus</i>	SE, FT
Sacramento split-tail	<i>Pogonichthys macrolepidotus</i>	SSC
Big brown bat	<i>Eptesiscus fucus</i>	
Western red bat	<i>Lasiurus blossevillii</i>	SSC
Pallid bat	<i>Antrozous pallidus</i>	SSC
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>	
Hoary bat	<i>Lasiurus cinereus</i>	
Yuma myotis	<i>Myotis yumanensis</i>	
American badger	<i>Taxidea taxus</i>	SSC
Saltmarsh harvest mouse	<i>Reithrodontomys raviventris</i>	SE, FP, FE
Monarch butterfly – overwintering (pop.1)	<i>Danaus plexippus</i>	FC
Saline clover	<i>Trifolium hydrophilum</i>	1B
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	SR
<p>Notes: FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; ST = State Threatened; SC = Special Concern (Federal) SSC = State Species of Special Concern (State); DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit; FC = Federal Candidacy; WL = CDFW Watch List; SR = State Listed Rare Plant; 1B = California rare plant rank</p>		

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

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as California Natural Diversity Database (CNDDDB) and Biogeographic Information and Observation System (BIOS). 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. 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 reduced below a level of significance under CEQA:

COMMENT 1: Project Design Analysis for Preferred Alternative

The CEQA Guidelines (§§ 15124 and 15378) require that the environmental document incorporate a full Project description, including reasonably foreseeable future phases of the Project and require that it contain sufficient information to evaluate and review the Project's potentially significant impacts.

To fully address the Project's potentially significant impacts to fish and wildlife resources and provide a comprehensive comparison analysis of the potentially significant impacts from each proposed alternative, the following information should be included in the draft EIR:

- A full description of the proposed improvements for each alternative. Descriptions should include detailed information on any potential facility improvement locations, barrier installations, bridge construction or replacements, culvert extensions or replacements, artificial light source installations or replacement locations, signage placements, over-crossings, under-crossings and intersection improvements;
- The text description should include post mile references and cross-reference map figures to fully illustrate the construction limits for each alternative;
- A full description of the proposed improvements noted in bullet one that includes quantities of material to be employed and a detailed description of how the proposed work will be completed, as well as a construction schedule for each proposed alternative;

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- A full description of the proposed areas of impact for the Project elements as noted above for each alternative described in acres and linear feet as well as an analysis of the vegetation type and number of trees to be trimmed or removed. A table that compares the acres of impacts and tree removals to each applicable habitat type for each of the alternatives should also be included in the draft EIR;
- An artificial light output analysis for each alternative and table that compares the potential artificial light output for each alternative to existing baseline levels;
- A full description of the proposed locations for staging areas and access routes for each alternative;
- A preliminary design plan set for each alternative.

COMMENT 2: Project Design Analysis and Coordination

Issue: The Project has the potential to significantly adversely affect fish and wildlife resources associated with Novato Creek, Tolay Creek, Cheda Creek, Simmons Slough, the Petaluma River and their associated tributaries that may be subject to notification requirements pursuant to Fish and Game Code § 1602. The Project and all potential alternatives must be designed to allow natural stream flow and sediment transport processes to persist in areas where stream crossings will be affected, for long term dynamic channel stability.

Recommendation: CDFW recommends the following measures be incorporated into the EIR as conditions of approval:

Recommendation Mitigation Measure 1: Design Coordination

Early and continued 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 and prior to design selection. Re-initiation of design consultation should be at 30% design at minimum and throughout the permitting process for review and comment.

Recommendation Mitigation Measure 2: Bridge and Stream Crossing 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 stream crossing designs. CDFW strongly recommends incorporation of free-span bridge designs that are at minimum 1.25 times greater than the channel

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width. Such designs allow natural stream flow and sedimentation processes to continue for long term dynamic channel stability.

Recommendation Mitigation Measure 3: Stream Crossing Analysis

CDFW recommends providing a series of tables and maps that identify all potential stream crossings, culverts and stream modifications for each of the proposed alternatives. The tables should include PM location of the conveyance, proposed project work, linear feet of impact, acres of impact, proposed tree removals, potential for use of conveyance in terrestrial connectivity (See **Wildlife Connectivity** Comment Section) and potential for use of conveyance for fish passage (see **Fish Passage Assessment** Comment Section).

COMMENT 3: Wildlife Connectivity

Issue: California wildlife is losing the ability to move and migrate as habitat conversion and built infrastructure disrupt species habitat and cut off migration corridors (Senate Bill 790; SB-790). This Project has the potential to significantly modify wildlife movement over an 8-mile linear stretch of highway within the SR-37 corridor and improve connectivity if designed appropriately. CDFW supports the recommendation of the lead agency to utilize elevated roadway structures within this corridor. Elevated roadways have the potential to improve both terrestrial and aquatic connectivity along SR-37. The Project may still have the potential to locally fragment the surrounding habitat and increase vehicle-wildlife collisions and should be programmed to promote terrestrial connectivity and reduce vehicle-wildlife collisions. Terrestrial connectivity elements such as wildlife friendly culverts, directional fencing, strategically placed median barriers, under-crossings, over-crossings and elevated causeways should be programmed into the Project as design features or conditions of approval in coordination with the natural resource agencies.

Recommendation: CDFW recommends the following are incorporated into the draft EIR as conditions of approval:

Recommendation Mitigation Measure 1: Wildlife Connectivity

The draft EIR should include the results of a Project wildlife movement study. CDFW recommends the study occur over a period of at least 12 months prior to the development of designs so they may be incorporated into the Project development. The study should occur within the limits of the proposed Project to develop a baseline understanding of the areas where wildlife movement, crossings and mortalities are most prevalent. The study should also be utilized to develop Project design to identify areas where wildlife crossing structure(s) installation(s) would result in the largest benefit to rare, threatened and endangered species as well as special-status species and non-special-status species for wildlife connectivity. Analysis during the 12-month study should be utilized to determine the type, size and number of structures that would be most beneficial to facilitate wildlife connectivity (new wildlife crossing culverts, modification of existing culverts, elevated

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causeways, etc.). Upon completion of the Project, wildlife connectivity structures and movement corridors should be studied for an additional 6 to 12 month period, at minimum, to determine the effectiveness of the designs. The protocol for the baseline survey, post-construction surveys, site selection criteria and design criteria for the development of the wildlife connectivity structures should follow the protocols outlined in; *The California Department of Transportation (Caltrans), Wildlife Crossings Design Manual* (Caltrans, 2009) and the *Federal Highway Administration Wildlife Crossing Structure Handbook – Design and Evaluation in North America, Publication No. FHWA-CFL/TD-11-003* (FHWA, 2011).

Recommendation Mitigation Measure 2: Design Coordination

Early and continued coordination with Habitat Conservation and the CDFW Conservation Engineering Branch is recommended as noted in **Recommendation Mitigation Measure 1 – Design Coordination** of the **Comment 2 - Project Design Analysis and Coordination** Section of this letter.

Recommendation Mitigation Measure 3: Wildlife Connectivity and Advanced Mitigation

CDFW recommends incorporating facets of existing CDFW programs that can be used to promote habitat connectivity. Reference the **Advanced Mitigation Program Section** of this comment letter for more information on the programs and Senate Bill 790 (SB-790, 2021).

COMMENT 4: Fish Passage Assessment

Issue: Multiple potential fish passage barriers and unassessed locations exist within the identified Project limits, as described in the recommendations section below. Senate Bill 857 (SB-857), which amended Fish and Game Code § 5901 and added § 156 to the Streets and Highways Code states in § 156.3, “For any project using state or federal transportation funds programmed after January 1, 2006, [Caltrans] shall ensure 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 [CDFW] 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 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 [CDFW].”

Evidence the impact would be significant: The Project contains stream crossings within areas mapped as historic or current watersheds where anadromous fish are, or historically were found. The species include but are not limited to Steelhead – California Central Valley DPS (BIOS; DS-810), Steelhead – Central Coast DPS (BIOS; DS-806), Chinook Salmon – Central Valley Fall Run/Late Fall Run ESU (BIOS; DS-802), Chinook

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Salmon – Spring Run of the Sacramento River Drainage/Central Valley Spring Run (BIOS; DS-801), Chinook Salmon – Winter Run (BIOS; DS-800), longfin smelt (BIOS; DS-1324) and delta smelt (BIOS; DS-1249). The decline of naturally spawning salmon and steelhead trout is primarily a result of the loss of appropriate stream habitat and the inability of fish to get access to habitat, according to reports to the Fish and Game Commission and by the CDFW (CDFW, 1996). Restoration of access to historical spawning and rearing areas should be incorporated into the Project design through barrier modification, fishway installation, or other means (CDFW, 1996).

Recommendations: If barriers or unassessed barriers noted within the Project limits identified below are found to be a barrier to fish passage, remediation of the problem should be designed into the Project by the implementing agency as a Project feature in consultation with CDFW and other natural resource agencies. CDFW recommends discussing the following locations as they pertain to fish passage:

Location 1, Novato Creek, PM 11.69; SR-37, (Latitude: 38.0872; Longitude: -122.5345; Marin County), Fish Passage Assessment Database ID# 732744, fish barrier status: unknown, requires a detailed survey per results of reconnaissance survey (First Pass).

Location 2, Simmons Slough, PM 13.04, SR-37, (Latitude: 38.0976; Longitude: -122.5211; Marin County), Fish Passage Assessment Database ID# 732746, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 3, Unnamed tributary to the Petaluma River, PM 1.13; SR-37, (Latitude: 38.1261; Longitude: -122.4896; Sonoma County), Fish Passage Assessment Database ID# 732817, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 4, Unnamed tributary to San Pablo Bay, PM 2; SR-37, (Latitude: 38.1377; Longitude: -122.4702; Sonoma County), Fish Passage Assessment Database ID# 732818, fish barrier status: unknown.

Location 5, Petaluma River, PM 0; SR-37, (Latitude: 38.1156; Longitude: -122.5056; Sonoma County), Fish Passage Assessment Database ID# 761443, fish barrier status: unassessed.

Location 6, Unnamed tributary to the Petaluma River, PM 0.2; SR-37, (Latitude: 38.1175; Longitude: -122.5031; Sonoma County), Fish Passage Assessment Database ID# 761444, fish barrier status: unassessed.

Location 7, unnamed tributary to the Petaluma River, PM 1.9; SR-37, (Latitude: 38.1324; Longitude: -122.4792; Sonoma County), Fish Passage Assessment Database ID# 761445, fish barrier status: unassessed.

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Location 8, Water Tank Cattle Pass – Tolay Creek, PM 3.2; SR-37, (Latitude: 38.1447; Longitude: -122.4588; Sonoma County), Fish Passage Assessment Database ID# 761446, fish barrier status: unassessed.

The fish passage section should discuss the current status of the crossing location noted in the California Fish Passage Assessment Database, conduct first pass and or second pass fish assessments, as necessary, as well as provide images of the upstream and downstream ends of water conveyance structure. CDFW requests a fish passage discussion section is included to address this potentially significant impact through the following avoidance and minimization measures, which should be made conditions of approval by the lead agency.

Recommended Mitigation Measure 1: Fish Passage Assessment

To evaluate potential impacts to native fish species and fisheries resources, Caltrans should submit the assessment to the CDFW 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 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 CDFW. CDFW shall be engaged prior to design in early coordination and at 30% design at minimum.

Recommended Mitigation Measure 2: Fish Passage Design Coordination

CDFW recommends incorporation into the EIR a condition of approval to engage with CDFW in early and continued coordination before design commences as specified in **Recommendation Mitigation Measure 1: Design Coordination** and **Recommendation Mitigation Measure 2: Bridge and Stream Crossing References** from the **COMMENT 2: Project Design Analysis and Coordination** section of this comment letter.

COMMENT 5: Bat Assessment and Avoidance

Issue: The draft EIR should address the potential for bats to roost within the Project limits for each alternative and provide a species list and the potential locations where bats may exist throughout the Project. In order to determine the extent of potential impacts to bats and determine where habitat loss may occur, the lead agency should develop tables, maps and text descriptions where structures will be removed or replaced that can support roosts. It is also important to develop detailed descriptions, tables and maps that note where new structures will be constructed that could provide new roosting habitat such as bridges, overpasses and other anthropogenic structures for each alternative.

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

Recommended Mitigation Measure 1: Bat Habitat Assessment

A qualified biologist should conduct a habitat assessment within the Project limits for suitable bat roosting habitat to be included in the draft EIR. The habitat assessment shall include a visual inspection of features within 200 feet of the work area for potential roosting features including trees, culverts, bridges, 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 utilizing night-exit survey methods, sound analyzation equipment survey methods and visual inspection within tree stands or anthropogenic structures from March 1 to April 15 or August 31 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 August 31 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 or 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 to March 1 through April 15 and/or August 31 through October 15.

Recommended Mitigation Measure 3: Permanent Bat Roost Design

CDFW recommends inclusion of permanent bat roost structures into the design of new elevated roadways, bridges, causeways or overpasses to avoid potentially significant impacts from permanent habitat loss. The structures should be designed in coordination with CDFW and include the appropriate baffle spacing or features to accommodate multiple species of bats as specified in the *Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions Manual* (H.T. Harvey, 2019). The Project should achieve a no net loss in bat habitat as a result of Project completion and design structures that can accommodate future population growth. The future growth should be based on the reproductive rates and estimated population growth rates of species known to persist within the Project limits based on peer reviewed scientific literature.

COMMENT 6: Nesting Birds

CDFW encourages Project implementation outside of the bird nesting season, which extends from February through early September. However, if anthropogenic structure work activities, ground-disturbing or vegetation-disturbing activities must occur during the nesting season, the lead agency is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act (MBTA) or Fish and Game Code. To evaluate and avoid potential impacts to nesting bird species, CDFW recommends incorporating the following mitigation measures, and that these measures be made conditions of approval for the Project:

Recommended Mitigation Measure 1: Nesting Bird Pre-Construction Surveys

A qualified biologist shall conduct pre-activity surveys for active nests for a minimum of two seasons prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. Those survey results can be utilized to determine project design, access roads, avoidance of sensitive nesting habitat and other project related elements. Results shall be submitted to CDFW within 14 days of completion for review.

Recommended Mitigation Measure 2: Nesting Bird Construction Surveys

A qualified biologist shall conduct pre-activity surveys for active nests no more than seven (7) days prior to the start of ground or vegetation disturbance and every fourteen (14) days during Project activities to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the Project site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. Prior to initiation of ground or vegetation disturbance, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once Project activities begin, CDFW recommends having the qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

Recommended Mitigation Measure 3: Nesting Bird Buffers

CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project site would be concealed from a nest site by topography. CDFW recommends that a qualified biologist advise and support any variance from these buffers.

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COMMENT 7: California Clapper Rail/California Black Rail

Issue: The Project has the potential to result in potentially significant impacts to fish and wildlife resources that support California clapper rail aka Ridgway's Rail (CCR), a State endangered, federally endangered, and fully protected species and California black rail (CBR) a State threatened and fully protected species. As lead agency, Caltrans must adopt the appropriate avoidance and minimization measures as conditions of approval to avoid take of a fully protected species in the draft EIR.

Evidence the impact would be significant: The Project proposes to conduct work within suitable habitat and within the predicted range of the CCR and CBR habitat (BIOS; DS-928, DS-2108, DS-2107). Multiple occurrences of the species are also present within the Project limits in the CNDDDB (BIOS; DS-45) that are considered extant. If permanent impacts are proposed within CCR/CBR habitat it may not be feasible to incorporate conditions of approval that can reduce the impacts below a level of significance.

Recommendation: CDFW recommends the following are incorporated into the draft EIR as conditions of approval:

Recommended Mitigation Measure 1: CCR/CBR Protocol Level Surveys

Protocol level surveys should be conducted beginning between January 15 and February 1. A minimum of four surveys are required, each survey should be 2 to 3 weeks apart and the final survey should be completed by March or mid-April to ensure that no CCR/CBR are present during construction. Surveys should be completed prior to the initiation of construction with three weeks remaining after completion of surveys and before Project initiation to submit results to CDFW for review. Protocol survey requirements should be followed as recommended in the *USFWS Clapper Rail Survey Protocol* (USFWS, 2015), *Secretive Marsh Bird Survey Protocol Comparison in San Francisco Bay* (Wood, 2014) and *USFWS Site-Specific Protocol for Monitoring Marsh Birds* (Wood et al., 2017).

Recommended Mitigation Measure 2: CCR/CBR Avoidance and Minimization

If CCR/CBR is detected during protocol surveys, no work activity shall occur from February 1 to August 31 during the CCR/CBR nesting season, within suitable CCR/CBR habitat. Suitable CCR/CBR habitat includes but is not limited to marshes, wetlands, streams and waterways, as well as associated upland habitat capable of providing upland refugia habitat as determined by a qualified biologist experienced with CCR/CBR.

Recommended Mitigation Measure 3: CCR/CBR Avoidance Buffers

If breeding CCR/CBR are determined to be present, activities will not occur within 700 feet of an identified calling center. If the intervening distance across a major slough channel or across a substantial barrier between the CCR/CBR calling center

and any activity area is greater than 200 feet, work may proceed at that location within the breeding season in consultation with CDFW.

Recommended Mitigation Measure 4: CCR/CBR High Tide Restriction

To avoid the loss of individual CCR/CBR's, activities within or adjacent to CCR/CBR suitable habitat will not occur within 2 hours before or after extreme high tides (6.5 feet or above, as measured at the Golden Gate Bridge). This is when the marsh plain is inundated and protective cover for CCR/CBR is limited. Project activities could prevent CCR/CBR from reaching available cover.

COMMENT 8: Salt Marsh Harvest Mouse

Issue: The Project has the potential to result in potentially significant impacts to fish and wildlife resources that support Salt marsh harvest mouse (SMHM) a State fully protected species and State and federal endangered species. As lead agency, Caltrans must adopt the appropriate avoidance and minimization measures as conditions of approval to avoid take of a fully protected species in the draft EIR.

Evidence the impact would be significant: The Project proposes to conduct work within suitable habitat and within the predicted range of SMHM (BIOS; DS-943, DS-2568). An occurrence of the species is also present within the Project limits in the CNDDDB (BIOS; DS-45) that is considered extant. If permanent impacts are proposed within SMHM habitat it may not be feasible to incorporate conditions of approval that can reduce the impacts below a level of significance.

Recommendation: CDFW recommends incorporation of the following measures into the draft EIR:

Recommended Mitigation Measure 1: SMHM Suitable Habitat Analysis and Survey

A qualified biologist, experienced with SMHM shall conduct a suitable habitat analysis and focused surveys a minimum of one season prior to the initiation of construction. Focused surveys shall occur in areas proposed for work within three-hundred feet of tidal marsh habitat. Maps of suitable habitat and any detections of SMHM should be included in the draft EIR.

Recommended Mitigation Measure 2: Construction Monitoring and Survey

A qualified biologist, experienced with SMHM shall conduct focused surveys a minimum of seven days prior to the initiation of construction including the creation of staging and access roads within three-hundred feet of tidal marsh habitat. Any vegetation within suitable habitat shall be cleared with hand-tools under supervision of a qualified biologist. Heavy equipment such as tractors or excavators working in SMHM habitat may proceed after the initial hand clearing has occurred and the

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biologist has given approval to proceed. A biologist shall be present on-site at all times when work is occurring in SMHM habitat. If a mouse of any species is observed within the project area, work within the vicinity should be halted immediately by the qualified biologist and the mouse should be allowed to leave the work area. SMHM may not be handled or captured at any time during site preparation or project activities. If an injured or dead SMHM is discovered at the project sites, consultation with CDFW is required immediately.

Recommended Mitigation Measure 3: SMHM High Tide Restriction

See **Recommended Mitigation Measure 4: CCR/CBR High Tide Restriction** and apply the same measure for SMHM.

COMMENT 9: Western Monarch Butterfly Roosting and Over-Wintering Sites

Issue: The Project is proposed to occur within known overwintering sites for western monarch butterfly populations according to findings in CNDDDB (BIOS; DS-45) and The Western Monarch Count Organization. An overwintering site has specifically been identified at latitude 38.153405, longitude -122.446464 (Site ID 3137, <https://www.westernmonarchcount.org/find-an-overwintering-site-near-you/>). Monarch Butterfly modeling habitat mapping also indicates potential habitat from Reclamation Road east to the Project limit at Sears Point (BIOS; DS-2861).

Evidence the Impact would be Significant: The Western monarch has been identified in the California's State Wildlife Action Plan as a Species of Greatest Conservation Need. Western monarch butterfly populations declined by more than 99 percent since the 1980s. An estimated 4.5 million monarchs overwintered on the California coast in the 1980s, whereas in 2020, the population estimate for migratory overwintering monarchs was less than 2,000 butterflies. This extreme population decline is due to multiple stressors across the monarch's range, including the loss and degradation of overwintering groves; pesticide use, loss of breeding and migratory habitat; climate change; parasites and disease. In recent years, monarchs have not clustered in the southern-most part of their overwintering range, and they are likely year-round residents in some areas of the coast (Xerxes, 2021; <https://xerxes.org/monarchs>). This drastic decline of the species makes each known roosting or overwintering site critical to the recovery of the species. Assembly Bill-559 (AB-559) promotes initiatives to protect and restore monarch habitat within transportation corridors, such as SR-37 and encourage public entities such as Caltrans to create, enhance and restore monarch butterfly habitat throughout its native range in cooperation with CDFW. Development of a monarch butterfly conservation plan and incorporation of that plan into the Project features or conditions of approval to avoid potentially significant impacts should be included in the draft EIR.

Recommendations: The draft EIR should incorporate the following for Western monarch butterflies:

Recommended Mitigation Measure 1: Protect, Manage, Enhance and Restore Monarch Butterfly Overwintering Sites

- Conduct overwintering grove habitat assessment(s) and develop and implement long-term grove management plans (<https://www.westernmonarchcount.org/>). Management plan actions for groves may include, but are not limited to:
- Enhance roosting trees within overwintering groves and within 1/2 mile of groves by planting native insecticide-free trees (e.g., Monterey pine (*Pinus radiata*), Monterey cypress (*Cupressus macrocarpa*), Coast redwood (*Sequoia sempervirens*), coast live oak (*Quercus agrifolia*), Douglas fir (*Pseudotsuga menziesii*), Torrey pine (*Pinus torreyana*), western sycamore (*Platanus racemosa*), bishop pine (*Pinus radiata*) and others, as appropriate for location).
- Avoid the removal of trees or shrubs within 1/2 mile of overwintering groves, except for specific grove management purposes, and/or for human health and safety concerns. The maintenance of trees and shrubs within a 1/2 mile of these sites provides a buffer to preserve the microclimate conditions of the winter habitat.
- Conduct management activities in groves from March 16-September 14, in coordination with a monarch biologist, such as tree trimming, mowing, burning and grazing in monarch overwintering habitat outside of the estimated timeframe when monarchs are likely present.
- Enhance native, insecticide-free nectar sources by planting fall/winter blooming forbs or shrubs within overwintering groves and within one mile of the groves (https://xerces.org/sites/default/files/publications/18-003_02_Monarch-Nectar-Plant-Lists-FS_web%20-%20Jessa%20Kay%20Cruz.pdf).
- Avoid the use pesticides within one mile of overwintering groves, particularly when monarchs may be present. If pesticides are used, then conduct applications from March 16-September 14, when possible. Avoid the use of neonicotinoids or other systemic insecticides, including coated seeds, any time of the year in monarch habitat due to their ecosystem persistence, systemic nature, and toxicity. Avoid the use of soil fumigants.
- Consider non-chemical weed control techniques, when possible (<https://www.cal-ipc.org/resources/library/publications/non-chem/>).
- Remove tropical milkweed that is detected, and replace it with native, insecticide-free nectar plants suitable for the location (https://xerces.org/sites/default/files/publications/18-003_02_Monarch-Nectar-Plant-Lists-FS_web%20-%20Jessa%20Kay%20Cruz.pdf).

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- To assist in maintaining normal migration behavior, do not plant any type of milkweed within five miles of the coast from Mendocino County south through Santa Barbara County, and within one mile of the coast south of Santa Barbara County, unless the species of milkweed is native to the local area.
- Conduct grove monitoring for butterflies during the Western Monarch Counts each fall and winter. When possible, report when monarchs arrive and depart the groves each year (<https://www.westernmonarchcount.org/>).

COMMENT 10: State Listed, Rare and Native Plants

Issue: The draft EIR should address the potential for State listed, rare and native plants within the Project limits for each alternative and provide a species list and the potential locations where special-status plant species may exist throughout the Project.

Recommendation: Please incorporate the following into the draft EIR:

Recommended Mitigation Measure 1: State Listed, Rare and Native Plant

Surveys: An experienced botanist shall conduct a minimum of two focused rare plant surveys over two seasons prior to the initiation of construction and include the information in the environmental document or prior to construction for the natural resource agencies. Surveys will follow; *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities*, CDFW, 11/2009, revised 3/2018. In the event rare, threatened or endangered plants are discovered, additional measures may be needed, which may include work stoppage, flagging and avoidance of occurrences, collection of propagation material, site restoration and/or obtaining an Incidental Take Permit (Fish and Game Code section 2081, subd., (b)).

COMMENT 11: Light Impact Analysis and Discussion

Issue: A significant portion of the proposed Project limits within the SR-37 corridor do not contain any overhead artificial light sources. It is unclear if the Project proposes the installation of new or replacement light sources. CDFW strongly recommends that no new or replacement artificial lighting is installed as a result of Project completion. New lighting especially in areas where no lighting currently exists, has potential for significant impacts to occur that could result in a finding of significance. 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). Due to the high potential for songbirds and nocturnally active State listed and special-status species such as American badger CDFW recommends no lighting is installed as a result of Project completion to avoid these potentially significant impacts to biological resources.

Recommendation: Please incorporate the following into the draft EIR:

Recommended Mitigation Measure 1 – 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 draft EIR. 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 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 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 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 reduce the need for electrical lighting.

Recommended Mitigation Measure 5 – 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 12: Advanced Mitigation Program

Issue: The NOP does not specify if the Project will take advantage of long-range, advanced mitigation strategies. The draft EIR should be updated to incorporate facets of the CDFW and Caltrans Advanced Mitigation Program.

Recommendation: Advance mitigation strategies should be incorporated to ensure timely acquisition of any required mitigation. The Legislative Report from Assembly Bill 1282 Transportation Permitting Task Force (<https://calsta.ca.gov/-/media/calsta-media/documents/ab-1282-task-force-2019-report-remediated-101320-with-appendices.pdf>) states: “Historically, transportation agencies have implemented mitigation on a project-by-project basis once funding is approved for the final stages of a project and environmental permits are obtained. Advance mitigation presents an innovative opportunity for many transportation projects, with potentially significant reductions of time and costs associated with providing necessary mitigation. It can be applied in highway, rail, and transit projects in both urban and rural areas.” In addition, the Statewide Advanced Mitigation Initiative (<https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/sami-a11y.pdf>) 2016 Memorandum of Understanding between Caltrans, CDFW, the California State Water

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Resources Control Board, the U.S. Army Corps, the U.S. Environmental Protection Agency, United States Fish and Wildlife Service, and National Oceanic and Atmospheric Administration states:

- Considering biological conservation and mitigation needs early in a project's timeline, prior to project design and development, can reduce costs and allow natural resources conservation and mitigation to enhance the sustainability of those natural resource systems.
- Long-range advance mitigation and conservation planning would allow transportation agencies to anticipate potential mitigation and conservation needs for planned transportation projects and to meet those needs in a more timely and cost-efficient way.
- Advance mitigation and conservation planning would allow mitigation funding for transportation projects to be directed to agreed-upon conservation priorities and would allow for the establishment, enhancement, preservation, and/or restoration, as appropriate, of habitat that enhance the sustainability of natural systems by protecting or restoring connectivity of natural communities consistent with, but not limited to the Endangered Species Act § 7(a)(1), California Fish and Game Code §2055, Rivers and Harbors Act §10, and Clean Water Act §404 and §401.

Advanced Mitigation Program: CDFW currently has three programs that can accommodate advance mitigation planning: Conservation and Mitigation Banking, Natural Community Conservation Planning (NCCP), and Regional Conservation Investment Strategies (RCIS). CDFW staff are available to discuss these programs.

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.

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