State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: May 31, 2022

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From: Erin Chappell, Regional Manager
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Subject: State Route 84 Real McCoy Fender and Ramps Replacement Project, Mitigated Negative Declaration, SCH No. 2022040655, Solano County

The California Department of Fish and Wildlife (CDFW) has reviewed the draft Mitigated Negative Declaration (MND) for State Route – 84 (SR-84 Real McCoy Fender and Ramps Replacement Project (Project), pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1] CDFW is submitting comments on the draft 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 (NPPA) 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. CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT LOCATION AND DESCRIPTION

Caltrans, as the lead agency proposes improvements at Post Mile (PM) 2.49 in Solano County along SR-84. The Real McCoy Ferry provides access across Cache Slough between Ryer Island on the east side of Cache Slough and the City of Rio Vista on the west side of Cache Slough. The proposed improvements would restore the structural integrity of the ferry deck, fender system, and boat ramps. The original ramps were built in 1967 and extended in 1976. The existing timber fender systems were built in 1979,

[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.

repaired in 1987, and reconstructed in 2004. The existing timber fender systems were designed to guide the ferry to the boat ramps on both sides of the slough.

The existing Real McCoy Ferry system consists of ramps and fender systems on both sides of the Cache Slough. The Project area, meaning the area on both sides of the slough that would be directly impacted by Project activities, is a total of 5.73 acres. The west side of the Project area is a total of 2.93 acres and the east side is a total of 2.80 acres. The existing concrete approach ramps are 60 feet long and 20 feet wide. The fender system on the west side is 120 feet long, ranging from 46 feet to 65 feet wide, and the fender system on the east side is 120 feet long, ranging from 46 feet to 74 feet wide.

Currently, the fender systems are deteriorating in the form of splitting piles and other damaged or missing wooden components due to previous impacts and natural wear and tear. Moreover, as the ferry approaches the concrete ramps, it bumps against the fender system and does not glide smoothly along the fenders towards the ramps. The Build Alternative would replace the timber fender systems with new steel pile fender systems that would be eight feet wider than the existing systems, creating more space for the ferry to navigate to the ramps. In addition, the front side of the fender panels would be covered with rubber facing materials, which would allow for a smoother transition when impacted by the ferry.

Under existing conditions, the concrete ramps cannot accommodate larger vehicles, such as commercial trucks or emergency vehicles. The Build Alternative would replace both of the existing concrete ramps with new concrete approach slab ramps. This would increase the ramps' weight capacity, allowing them to accommodate commercial trucks, recreational vehicles, and emergency vehicles, to better meet the needs of Ryer Island's residents and visitors.

The Build Alternative would also modify the ferry boat deck surface by extending it eight feet on both ends and leveling up the surface kinks near both ends to help vehicles enter and exit the ferry more easily. Finally, the Project would install a monitoring station system within Caltrans’ right of way (ROW) that includes a vehicle detection/census station controller in Rio Vista.

During construction, two temporary construction easements (TCEs) from the State Lands Commission would be needed for in-water work. These activities would include constructing the cofferdams to dewater the work areas, pulling out the existing piles, and driving the new steel piles.

Fender Systems

Pile Removal

Piles would be pulled out directly using a barge-mounted crane or vibrated out using a vibratory hammer. Broken and damaged pilings that cannot be removed by either the

vibratory hammer or direct pull would be removed with a clamshell bucket or environmental clamshell. A clamshell is a hinged steel apparatus that operates like a set of steel jaws. An environmental clamshell bucket includes overlapping sides, rubber seals, and other features designed to minimize release of sediment. To remove piles, either type of clamshell bucket is lowered from a crane and then the jaws grasp the piling stub as the crane pulls up. The size of the bucket is minimized to reduce turbidity during piling removal. The clamshell bucket is emptied of material onto a contained area on a barge before it is lowered again into the water. If the entire pile cannot be removed, the pile would be cut by an excavator or clamshell bucket or hydraulic underwater chainsaw at or below the mudline. Piles cut by chainsaw or clamshell below the mud line would be cut off at lowest practical tide condition and at slack water.

Similarly, if a pile breaks near or above the sediment surface during pile removal, it may subsequently be cut using a clamshell bucket or chain to remove as much of the pile as possible from the water column and shallow sediment. In deep subtidal areas, if the piling is broken off at least one foot below the mud line, the remnant portion of the piling below the mud line may remain in place. In intertidal and shallow subtidal areas, the contractor would be required to cut piles at least two feet below the mud line if they are accidentally broken off during removal.

Extracted piles removed by any method would be placed into a containment area to avoid dropping adhered sediment in the water. Sediments spilled on work surfaces would be contained and disposed of at an appropriate upland disposal site. Holes remaining after piling removal would be left to fill in through natural sediment settlement and deposition. Extracted piles with attached sediment would not be shaken, hosed off, or hung-over water to drip; such piles would be moved expeditiously to the contained area prior removing adhered material.

Construct New Fender Pile Systems

The removed timber fender systems would be replaced with new steel pile fender systems covered with the rubber facing material at an appropriate offset from the existing system on both the east and west sides of the slough. The new fender systems would include debris catchers and dolphin systems for guiding the boat to the ramps. There would be 150 new piles, each up to 60 feet long and 30 inches in diameter. Pile installation would involve the following three-step process:

- Prior to pile installation, the contractor would predrill an over-sized hole to a depth at least 15 feet below the levee prism. The diameter of the predrilled hole would be at least 6 inches larger than the pile to be installed.

- The piles would be driven into place by a vibratory hammer mounted on a barge to a depth of roughly 30 to 50 feet.

- After the piles were installed, the space around each pile would be filled to the ground surface with dry sand, pea gravel, or cement grout. Soil would mostly displace laterally, and displacement would be negligible at the ground surface.

Construct New Ramps

The existing concrete approach slab ramps on both sides of the ferry crossing would be replaced with longer ramps that are four feet wider. To construct new ramps on both the east and west sides of the slough, the 30-foot-long section of the existing flexible pavement leading to the new concrete ramp and approach slab would be removed and replaced with a flexible pavement section with a 40-year design life. Driven sheet piling would be vibrated into position around three sides of the perimeter of the new concrete ramp. After the sheet piling system is installed, dewatering would be performed using the open sump method. Then, the old ramp concrete would be demolished and removed. Next, the four-foot-wide section for the new ramps would be excavated to match the depth of the current ramp systems. Due to the presence of soft soils, some over-excavation may be necessary to be replaced with better base material for the ramp concrete. The new reinforced concrete ramp, one-foot thick, would be poured in place using the sheet piles as the form on three sides. These sheet piles would remain in place permanently to protect the at-grade ramp from local scour. The tops of the sheet piles would be flame cut level with the top of concrete.

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 Cache Slough. 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 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 and15065). 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.

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.

COMMENTS AND RECOMMENDATIONS

CDFW would like to thank Caltrans for preparing the draft MND. 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: Longfin Smelt (*Spirinchus thaleichthys*) and Delta Smelt (*Hypomesus transpacificus*)

Issue: The IS/MND states that there is a potential for take of longfin and Delta smelt. The U.S. Fish and Wildlife Service (USFWS) has stated longfin smelt are present within Cache Slough all year round. The USFWS has stated that Cache Slough is likely one of the last remaining refugia for the species. Longfin and Delta smelt are listed as threatened under CESA. There are no approved work windows to avoid longfin or Delta smelt presence and it is assumed that the species could be present year-round.

Recommendations: CDFW recommends Caltrans apply for an Incidental Take Permit (ITP) pursuant to Fish and Game Code sections 2080 *et seq*. to address potential for "take" of longfin and Delta smelt.

COMMENT 2: Swainson's Hawk

Issue: The Project has potential for Swainson's hawk nesting habitat to be present within or surrounding the proposed Project area.

Recommendations: In order to avoid "take," CDFW recommends avoiding all Project-related disturbance within a minimum of 0.25 miles (and up to 0.5 miles depending on site-specific conditions) of a nesting Swainson's hawk during the nesting season. Please refer to the CDFW guidance document on Swainson's hawk, which is available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83992&inline, on take avoidance, minimization and mitigation measures. If take cannot be avoided to Swainson's hawk, CDFW recommends Caltrans apply for an ITP, pursuant to Fish and Game Code sections 2080 *et seq*. The CEQA document should also include measures to avoid or minimize loss of Swainson's hawk foraging habitat that may result from implementation of the Project. Any permanent loss of hawk foraging habitat should be appropriately mitigated, and the mitigation should be outlined within the IS/MND.

The Project CEQA document should specify that protocol-level surveys will be conducted during the Swainson's hawk nesting season which is generally from March 1 until September 15. The CEQA document should also include a description of the survey area, survey methodology and timing of each survey visit. Surveys should be conducted according to the Swainson's Hawk Technical Advisory Committee's (TAC) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline).

CDFW strongly recommends that the TAC survey method be strictly followed by starting early in the nesting season (late March to early April) in order to maximize the likelihood of detecting an active nest. Surveys should be conducted within a minimum 0.25-mile radius of the proposed Project area, and should be completed for at least the two survey periods immediately prior to initiating any Project-related construction work. Raptor nests may be very difficult to locate during egg-laying or incubation, or chick brooding periods (late April to early June) if earlier surveys have not been conducted. These full-season surveys may assist with Project planning, development of appropriate avoidance, minimization and mitigation measures, and may help avoid any Project delays.

COMMENT 3: Special-Status Plants

Issue: State threatened, endangered or rare plant species may occur within the Project area. Without appropriate mitigation measures, the Project could potentially have a significant impact on these species. Potential impacts to special-status plants include inability to reproduce and direct mortality. Unauthorized take of plant species listed as

threatened, endangered, or rare pursuant to CESA or the NPPA is a violation of Fish and Game Code. Special-status plants are typically narrowly distributed endemic species. These species are susceptible to habitat loss and habitat fragmentation resulting from development, vehicle and foot traffic, and introduction of non-native plant species.

Recommendations: The Project area should be surveyed for State-listed plant species by a qualified biologist following protocol-level surveys. Protocol-level surveys, which are intended to maximize detectability, may include identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. For more information on protocol-level surveys please see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline.

Special-status plant species should be avoided through delineation and establishment of a no-disturbance buffer of at least 50 feet from the outer edge of the plant population or specific habitat type required by special-status plant species. If State-listed plant species are identified during surveys and full avoidance of take is not feasible, take authorization through CDFW issuance of an ITP would be required.

COMMENT 4: Giant Garter Snake

Issue: The IS/MND indicates there is suitable giant garter snake habitat present in the Project area.

Recommendation: In order for CDFW to evaluate the temporary and permanent impacts to suitable upland habitat and provide recommendations for appropriate compensatory mitigation, the IS/MND should incorporate a more in-depth evaluation of the giant garter snake habitat that will be impacted. Due to the presence of giant garter snake habitat on-site, an ITP may be needed to meet appropriate compensatory mitigation.

COMMENT 5: Light Impact Analysis and Discussion

Issue: A significant portion of the proposed Project within the SR-84 corridor does not contain any overhead or artificial light sources. The various alternatives propose different types and levels of artificial light installation. Artificial light spillage beyond the prism of the roadway into natural areas may result in a potentially significant impacts through substantial degradation of the quality of the environment. Artificial light pollution also has the potential to significantly and adversely affect biological resources and the habitat that supports them. Unlike the natural brightness created by the monthly cycle of the moon, the permanent and continuously powered lighting fixtures create an unnatural light regime that produces a constant light output. Continuous light output for 365 days a year can also have cumulatively significant impacts on fish and wildlife populations.

Evidence the impact would be significant: Artificial night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone

et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Artificial night lighting has also been found to impact juvenile salmonid overwintering success by delaying the emergence of salmonids from benthic refugia and reducing their ability to feed during the winter (Contor and Griffith 1995). For nocturnally migrating birds, direct mortality as a result of collisions with anthropogenic structures due to attraction to light (Gauthreux, 2006) is another direct effect of artificial light pollution. There are also more subtle effects, such as disrupted orientation (Poot et al. 2008) and changes in habitat selection (McLaren et al. 2018). There is also growing evidence that light pollution alters behavior at regional scales, with migrants occupying urban centers at higher-than-expected rates as a function of urban illumination (La Sorte et al. 2021). While artificial light pollution can act as an attractant at both regional (La Sorte et al. 2021) and local (Van Doren et al. 2017) scales, there is also evidence of migrating birds avoiding strongly lit areas when selecting critical resting sites needed to rebuild energy stores (McLaren et al. 2018).

Recommendation: Due to the high potential for songbirds, marsh-birds, migratory birds, salmonids and nocturnally active State listed and special-status species CDFW recommends no lighting is installed as part of or as a result of Project in order to avoid potentially significant impacts to biological resources from artificial lighting.

CDFW recommends the following measures be included in the EIR to avoid potentially significant impacts to fish and wildlife resources including migratory birds, marsh birds, state listed species and fully protected species and the habitat that sustains them:

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

Recommended Measure 2 – Light Output Analysis: Isolux Diagrams that note current light levels present during pre-Project conditions and the predicted Project light levels that will be created upon completion of the Project shall be included in the 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 Measure 3 – Light Output Limits: All LED’s or bulbs installed as a result of the Project shall be rated to emit or produce light at or under 2700 kelvin that results in the output of a warm white color spectrum.

Recommended Measure 4 – Vehicle Light Barriers: Solid barriers at a minimum height of 3.5 feet should be installed in areas where they have the potential to reduce illumination from overhead lights and from vehicle lights into areas outside of the roadway. Barriers should only be utilized as a light pollution minimization measure if they do not create a significant barrier to wildlife movement. Additional barrier types should be employed when feasible, such as privacy slats into the spacing of cyclone fencing to create light barriers for areas outside the roadway.

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

Recommended Measure 6 – Light Pole Modifications and Shielding: All new or replacement light poles or sources of illumination shall be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat within the Project corridor in coordination with CDFW. In addition, the light pole arm length and mast heights should be modified to site-specific conditions to reduce excessive light spillage into natural landscapes or aquatic habitat within the Project corridor. In areas with sensitive natural landscapes or aquatic habitat the lead agency should also analyze and determine if placing the light poles at non-standard intervals has the potential to further reduce the potential for excessive light pollution caused by decreasing the number of light output sources in sensitive areas.

COMMENT 6: Advanced Mitigation Program

Issue: The EIR should specify if the Project will take advantage of long-range, advanced mitigation strategies. The EIR should be updated to incorporate facets of the CDFW and Caltrans Advanced Mitigation Program. This Project as proposed has the potential to impact up to 7.55 acres of habitat for fish and wildlife resources, add up to 12.17 acres of impervious surface, permanently impact 4.28 permanent wetlands and other waters and temporarily impact 10.35 acres of wetlands and other waters.

Recommendation: Advanced 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

Resources Control Board, the U.S. Army Corps, the U.S. Environmental Protection Agency, U.S. 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)(l), 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, 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. Will Kanz, Environmental Scientist, at (707) 337-1187 or Will.Kanz@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

cc: State Clearinghouse #2022040655

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