



Appendix N: National Marine Fisheries Service Concurrence Letter



This page is intentionally left blank.



N.1 National Marine Fisheries Service Concurrence Need

The Endangered Species Act (ESA) of 1973 provides protective measures from unlawful take for federally listed endangered or threatened species and their habitats. The ESA defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” In 50 CFR Part 222, harm is further defined as an act that actually kills or injures fish or wildlife. ESA Section 7(a)(1) requires federal agencies to use their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) if a federal agency undertakes, funds, permits, or authorizes any action that may affect endangered or threatened species or designated critical habitat (referred to as a federal nexus).

NMFS designated the Mormon Slough as critical habitat for Central Valley steelhead in 2000 (NMFS 2014), including the portion of the Mormon Slough within the Biological Study Area (BSA) for the proposed Project. Essential fish habitat (EFH) for Chinook salmon also occurs in the portion of the Mormon Slough within the BSA. In addition, there is critical habitat for green sturgeon and EFH for groundfish downstream of the BSA. While none of these species are present within the BSA at this time, preservation of fish passage and important habitat characteristics would be important to future restoration efforts of the Mormon Slough as fish habitat.

NMFS issued a “not likely to adversely affect” determination for the proposed Project on May 17, 2021, with regard to Central Valley steelhead and its critical habitat and the southern distinct population segment of North American green sturgeon and its critical habitat. NMFS also determined that the proposed Project would have “no adverse effect” on EFH for chinook salmon or groundfish.



N.2 NMFS Concurrence Letter for the Stockton Diamond Project dated March 17, 2021



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

Refer to NMFS ECO#: WCRO-2021-00423

May 17, 2021

Serge Stanich
Director of Environmental Services
770 L Street,
Suite 620,
Sacramento, California 95814

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Stockton Diamond Grade Separation Project

Dear Mr. Stanich:

On February 25, 2021, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the Proposed Action, the Stockton Diamond Grade Separation Project, carried out by the San Joaquin Regional Rail Commission (SJRRC) and the California High Speed Rail Authority (Authority) under U.S. Code (U.S.C.) Title 23 Section 327 and a Memorandum of Understanding (MOU) between the Federal Rail Administration (FRA) and the State of California, is not likely to adversely affect species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). NMFS recognizes that the MOU, effective July 23, 2019, designates the Authority as the federal lead agency for review of this Project under the National Environmental Policy Act (NEPA) and other federal environmental laws. Specifically, 3.2.1 of the MOU assigns the FRA's responsibilities under the ESA of 1973 (16 U.S.C. 661 – 667d) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 1976, as amended (16 U.S.C. 1801–1891d) for both formal and informal consultations, for projects included in the scope of the MOU. The Proposed Action is a component of the *ACEforward* program of projects, which is included in the MOU, therefore the Proposed Action is included in the scope of the MOU. NMFS received sufficient information on the Stockton Diamond Grade Separation Project to initiate the consultation on April 22, 2021. This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA and implementing regulations at 50 CFR 402. Thank you also for your request for consultation pursuant to the essential fish habitat (EFH) provisions in Section 305(b) of the MSA (16 U.S.C. 1855(b)) for this action.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available within two weeks at the Environmental Consultation Organizer [<https://eco.fisheries.noaa.gov>]. A complete record of this consultation is on file at NMFS California Central Valley Office in Sacramento, CA.



Consultation History

On October 20, 2020, HDR Inc. staff, on behalf of SJRRC, requested technical assistance via email from NMFS regarding the section of Mormon Slough between the Stockton Diversion Canal and Lake McLeod and whether the section should be considered fish habitat. NMFS confirmed that Mormon Slough did contain Central Valley (CCV) steelhead designated critical habitat and could potentially host individuals depending on the stream section in question.

On February 25, 2021, the Authority requested a letter of concurrence from NMFS regarding the Stockton Diamond Grade Separate Project. The request letter included an appendix with a project description, a list of potentially affected resources, and an effects analysis (Authority et al. 2021).

On March 1, 2021, NMFS requested a GPS project location and identification of the lead action agency. The Authority responded with clarification on March 3, 2021.

On March 4, 2021, NMFS requested additional information about the flyover designs considered and also requested confirmation on the number of railroad crossings proposed to be modified in the action. NMFS also confirmed that the section of Mormon Slough directly involved with the project, though highly degraded and hydrologically isolated, is still designated critical habitat for CCV steelhead (70 FR 52488, 9/2/2005).

On March 8, 2021, HDR Inc. staff shared the Hydrologic and Hydraulic Analysis and Design Memorandum with NMFS (Yim et al. 2021).

On March 17, 2021, a virtual coordination meeting was held between NMFS, Authority, HDR Inc., and SJRRC staff. NMFS explained the requirements of ESA Section 7 consultations and scenarios in which incidental take or adverse habitat effects could occur. Potential railway flyover designs were discussed. NMFS shared our Guidelines for Salmonid Passage at Stream Crossings (NMFS 2019) via email.

On April 22, 2021, the Authority and SJRRC submitted revised flyover design options and other requested information in an updated request letter (Authority 2021) via email. After review of this document, NMFS initiated the consultation.

Proposed Action

The SJRRC proposes to construct a grade separation of two principal railroad lines in Stockton, California. At the present time, the Burlington Northern and Santa Fe Railway (BNSF) Stockton Subdivision and the Union Pacific Railroad (UPRR) Fresno Subdivision consist of two main tracks each and they intersect each other at a level, at-grade crossing known as the Stockton Diamond inside the urbanized street grid of the City of Stockton. This rail intersection is located just south of Downtown Stockton near South Aurora Street and East Scotts Avenue and is considered the busiest at-grade railway junction in California as trains wait to cross this rail intersection. The at-grade crossing results in significant congestion and delays to services that moves people and freight throughout the California Central Valley as well as freight out to the

broader national network. The current, at-grade configuration of the track also results in significant delays to passenger and freight trains in the area, including those serving the Port of Stockton, as well as other rail lines in the area.

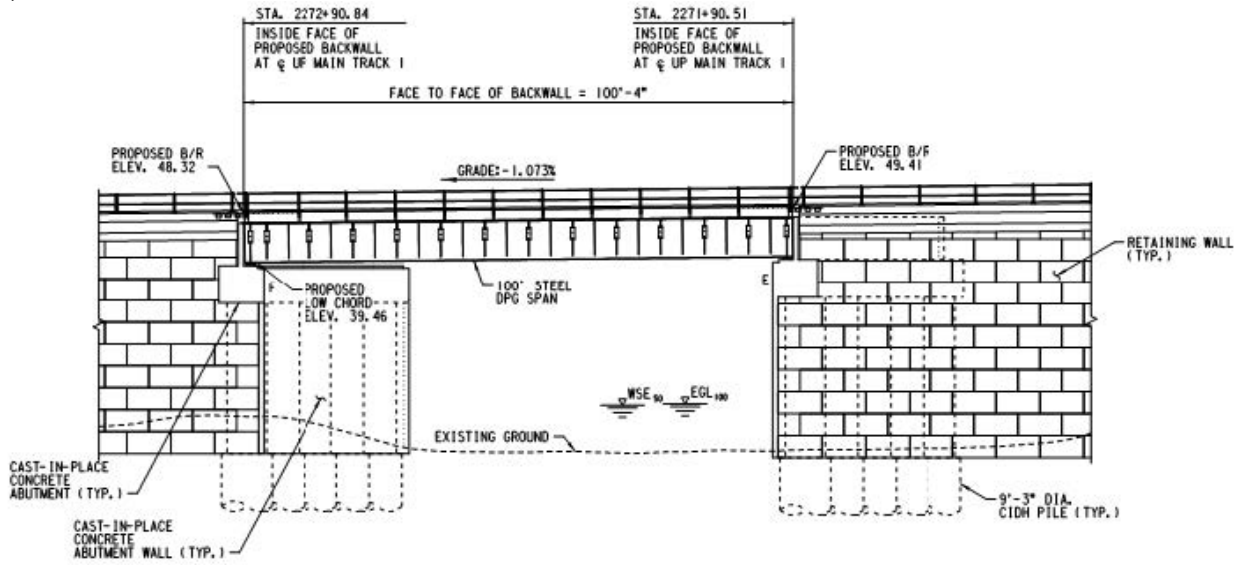
The proposed action is to replace the existing at-grade intersection of the BNSF Stockton Subdivision and UPRR Fresno Subdivision with a grade-separation structure that will elevate the UPRR main tracks above the BNSF main tracks, enabling through trains proceeding on the main tracks of each railroad to advance through the intersection without waiting on through trains on the main tracks of the other railroad. The UPRR flyover alignment is proposed to be shifted east of the existing Fresno Subdivision tracks so that construction of the new flyover would minimize impacts on existing rail operations. Construction of the Proposed Action would require either a clear span flyover bridge, a bridge with in-channel piers, or a multi-cell box culvert to span the Mormon Slough and associated floodplain. Existing drainage structures along Mormon Slough would remain in place after construction of the proposed slough bridge. Further, pipe culverts under the existing UPRR main tracks immediately downstream (west) of the flyover alignment would be left in place to support the remaining at grade connection track to BNSF. Drainage structures for passing flows beneath the new railroad flyover will either be open bottom box culverts or a bridge.

The SJRRC has committed to using a crossing type for the flyover spanning Mormon Slough that will retain a natural substrate stream channel bottom. This crossing would require a structure over Mormon Slough and would either be 1) a 100-foot-long, single-span bridge option would be skewed 15 degrees to the main tracks and provide a clear distance of approximately 89 feet between abutment walls, where the Mormon Slough channel would flow freely, 2) a four-cell, cast-in-place concrete, open bottom box culvert on pile foundations option would have four 12-foot-wide by 10-foot-tall cells with the walls of the culvert having driven-pile foundations, or 3) a precast concrete arch culvert option would consist of a single-cell arch structure on spread footings or pile foundations. The arch option would span 40 to 50 feet across the channel and have a rise of 10 to 15 feet (Figure 1). The commitment to keeping a natural stream channel bottom will be incorporated into the Final Environmental Impact Report and Environmental Assessment with the presented flyover design options for the project when the project is presented for public comment. In addition, SJRRC has committed to avoiding the use of riprap to armor the channel at this location. These measures are intended to ensure the project does not impair the quality of the channel for fish passage and that it does not further reduce the channel's suitability for restoration and use by relevant species in the future.

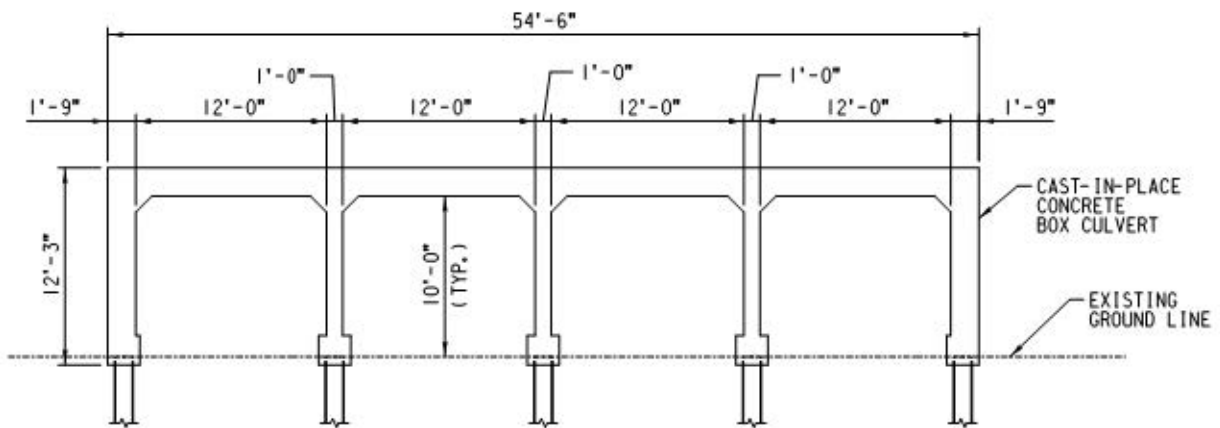
In addition to any permit conditions required under the Clean Water Act Section 402 construction general permit, which the contractor would obtain, the SJRRC has adopted the following avoidance and minimization measures that apply to all activities within 150 feet of aquatic resources to avoid contributing sediment or contamination to Mormon Slough:

- Prior to initiation of project-related activities, construction best management practices (BMPs) shall be employed on site to prevent erosion or runoff of loose soil and dust. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of disturbance areas to prevent the displacement of fill material.

1)



2)



3)

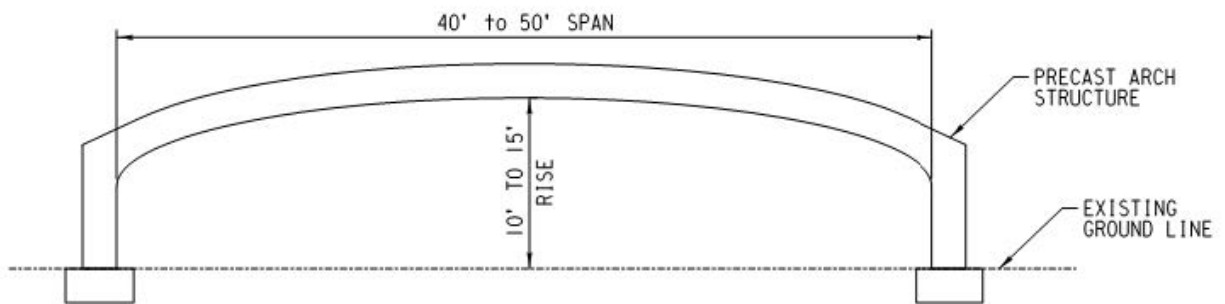


Figure 1. Stockton Diamond Grade Separation Flyover Designs Considered. 1) a single-span bridge, 2) a four-cell open bottom box culvert, and 3) a precast arch culvert, with estimated height-width measurements in feet.

- All BMPs shall be in place prior to initiation of project-related activities and shall remain until activities are completed. All erosion control methods will be maintained until all onsite soils are stabilized.
- The work areas will be reduced to the smallest practicable footprint throughout the duration of Proposed Action activities. Prior to any ground-disturbing activity, the project proponent will establish staging areas for construction equipment in areas that minimize impacts on sensitive biological resources, including aquatic resources. Staging areas (including any temporary material storage areas) would be located in areas that would be occupied by permanent facilities, where practicable. Equipment staging areas would be identified on final project construction plans. The project proponent would flag and mark access routes to restrict vehicle traffic within the project footprint to established roads, construction areas and other designated areas.
- All exposed and/or disturbed areas resulting from project-related activities shall be returned to their original contour and grade, and restored using locally native grass and forb seeds, plugs, or a mix of these methods. Areas shall be seeded with species appropriate to their topographical and hydrological character. Seeded areas shall be covered with broadcast straw and/or jute netted, where appropriate.
- All vehicle traffic associated with project-related activities shall be confined to established roads, staging areas, and parking areas. Vehicle speeds shall not exceed 15 miles per hour on access roads with no posted speed limit to avoid collisions with special-status species or habitats. Additionally, maintenance or refueling of vehicles or equipment must occur in designated areas and/or a secondary containment, located away from aquatic resources.
- During ground-disturbing activities, the project proponent may temporarily store excavated materials produced by construction activities in areas at or near construction sites within the project footprint. Where practicable, the project proponent will return excavated soil to its original location to be used as backfill. Any excavated waste materials unsuitable for treatment and reuse would be disposed at an off-site location, in conformance with applicable state and federal laws. Stockpiled, disassembled, and hazardous construction material should be stored at least 100 feet from aquatic resources, where possible.

Action Area

The proposed action is in the Lower Calaveras-Mormon Slough 8th Field Hydrologic Unit 18040004 in Stockton, California. The new railroad flyover will cross the middle of Mormon Slough at approximately Latitude 37.945186/Longitude -121.274638. Existing railroad bridges and culverts currently cross Mormon Slough upstream and downstream of the new crossing location but these structures are not proposed to be changed or modified as part of this action (Figure 2). Because Mormon Slough is currently hydrologically disconnected from both the San Joaquin River Delta downstream and the Calaveras River upstream due to human modifications of these waterways and creation of the Stockton Diverting Canal, it is not anticipated that sediment mobilization or water quality degradation to other critical habitat downstream will be



Figure 2. Proposed project area map for the new flyover structure path (green lines) and the existing railways supporting UPRR Fresno Subdivision service (purple lines) and BNSF Stockton Subdivision service (blue lines) over Mormon Slough in Stockton, California.

measurable or travel beyond BMP catchments or treatments to negatively affect waterways downstream; therefore the action area for this project is limited to the immediate construction footprint and the extent of the new grade separation and flyover structure. We considered, under the ESA whether or not the proposed action would cause any other activities and determined that it would not would cause additional consequences.

Background and Action Agency’s Effects Determination

The Authority identified that the following NMFS trust resources occur in the Stockton West USGS quadrangle and potentially in the action area for the proposed action:

- CCV steelhead, *Oncorhynchus mykiss*, (listed threatened, 71 FR 834, 1/5/2006) and its critical habitat (70 FR 52488, 9/2/2005);
- southern Distinct Population Segment (sDPS) of North American green sturgeon, *Acipenser medirostris*, (listed threatened, 71 FR 17757, 4/7/2006) and its critical habitat (74 FR 52300, 10/9/2009);
- Essential fish habitat (EFH) for chinook salmon (*Oncorhynchus tshawytscha*), and
- EFH for groundfish.

The species range and critical habitat for CCV steelhead does coincide with the reach of Mormon Slough that occurs in the action area but neither the accepted range nor critical habitat for green sturgeon overlap with the action area as defined by Figure 2. The reach of Mormon Slough that crosses the action area is also mapped as EFH for Chinook salmon but the mapped extent of EFH for groundfish does not coincide with the action area.

The portion of Mormon Slough the new railway flyover will cross is downstream of the split between the Old Calaveras River channel and Mormon Slough/Stockton Diverting Canal. In the past, Mormon Slough flowed southwest from its split from the Calaveras River to the harbor/Delta as a distributary but this lower slough channel was closed off by a levee constructed by the U.S. Army Corps of Engineers in the creation of the Stockton Diverting Canal/Calaveras River reroute decision (Stockton East Water District and FISHBIO 2019). The Stockton Diverting Canal was completed in 1911 and the associated flow rerouting decision provides 12,500 cubic-feet-per-second of flood control capacity around the City of Stockton but has isolated the portion of lower Mormon Slough within the Action Area and prevents it from receiving Calaveras River flows. Therefore at present, while this portion of Mormon Slough intermittently collects stormwater discharges from its urban sub-basin, it is usually completely dry. In fact, two low-flow road crossings currently intersect and cross the channel/floodplain in this flow-isolated section and, just before the channel’s connection with McLeod Lake/Delta water, a road on an earthen berm prevents San Joaquin River/Delta water from encroaching back into Mormon Slough as well. Since the channel bottom consists of compacted clay, sand, and silt without much gravel or vegetation and is normally dry, the channel also hosts several homeless camps in the channel and floodplain, evident in both aerial imagery and recent site photos provided by the Authority (Authority et al. 2021).

In the future, local agencies and/or nonprofits have indicated this part of Mormon Slough may be used as part of flood control planning in the long-term and/or may rehabilitate the area to provide

bicycle/pedestrian routes (Yim et al. 2021). Considering the potential for restoration of flows to be returned to this portion of Mormon Slough, the channel may become accessible to anadromous fishes and become available for their migration and rearing purposes in the far future. It is anticipated restoration of flows will occur in the far future, after construction of the proposed flyover is complete and grade separation is achieved.

The Authority has determined that the proposed action may affect but is not likely to adversely affect CCV steelhead or its critical habitat, nor sDPS green sturgeon or its critical habitat. The Authority has also determined that the proposed action will have no adverse effect on EFH for Chinook salmon or groundfish. These determinations were reached because the section of Mormon Slough crossed the proposed flyover is hydrologically isolated and disconnected from downstream waters that may actually harbor these species and neither individuals of the species nor functional EFH is present in the action area as the waterway is typically completely dry without any water flow to or from anadromous waterways.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, “effects of the action” are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02). In our analysis, which describes the effects of the proposed action, we considered 50 CFR 402.17(a) and (b). When evaluating whether the proposed action is not likely to adversely affect listed species or critical habitat, NMFS considers whether the effects are expected to be completely beneficial, insignificant, or discountable. Completely beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Effects are considered discountable if they are extremely unlikely to occur.

The potential effects of the proposed action include:

- Further impediment to volitional fish passage through Mormon Slough
- Further degradation of critical habitat available in Mormon Slough

Because this section of Mormon Slough is completely isolated both upstream and downstream from waters used by CCV steelhead and sDPS green sturgeon, it is impossible for an individual from either population to access the action area of this project. Only during an extreme or historic flood event (>100-year event) would the levee system around the Stockton Diverting Canal be at real risk of being overtopped and allow river or Delta water to enter this section of the Mormon Slough channel because of current levees and other flow control modifications. The probability of such an event occurring during the proposed construction timeline would be so low it would be considered discountable. Without a reasonable ability for fish to access or use

the section of Mormon Slough involved in the construction of the flyover, there is no chance for individuals to be exposed to direct adverse effects normally associated with the construction process and incidental take of listed species is not expected to occur.

While the action area does not contain designated sDPS green sturgeon critical habitat (though Lake McLeod, downstream, is sDPS green sturgeon designated critical habitat), this section of Mormon Slough is still CCV steelhead designated critical habitat, despite its current state. Though the channel and floodplain cannot currently support any steelhead life history needs, it is important that the proposed action does not preclude the restoration or reestablishment of such functions in the future. The Primary Constituent Elements essential to the species that could be restored in this section of Mormon Slough are: 1) freshwater migration corridors for both adult and juvenile steelhead that are free of obstruction and excessive predation, and 2) freshwater rearing sites with sufficient water quantity and connectivity to support juvenile forage, growth, and development (NMFS 2014).

Several existing railway crossings over Mormon Slough in the action area utilize drainage structures that would not meet NMFS fish passage criteria for bridges and culverts and would be considered passage impediments if flows were restored. However, the proposed action only proposes the construction of a new flyover to achieve grade separation and does not include plans to modify any of these existing structures, or any other drainage structure, in the action area. Railroad tracks may be realigned on top of these existing crossings but there will be no changes or maintenance to the base structures in the channel/floodplain and therefore the proposed action does not present an opportunity to improve fish passage conditions through existing structures. Through coordination with the Authority and SJRRC, the three options for the flyover design now meet NMFS fish passage criteria (NMFS 2019) and will retain a natural streambed bottom regardless of which structure is ultimately selected. These designs ensure fish passage will be viable when and if blockages up and downstream are modified to restore stream flow to this section of Mormon Slough. Since the revised designs will not obstruct anadromous fish passage and do not preclude the restoration of flow to Mormon Slough, the proposed project will not adversely affect the ability of CCV steelhead critical habitat in this section to serve as a freshwater migration corridor.

Also through coordination, the Authority and SJRRC have purposefully excluded the use of riprap to armor the channel at this location. The placement of riprap, or other hard bank armoring practices, without sufficiently addressing the adverse impacts of these tactics would further degrade the rearing habitat available to the species, if flows and access were restored in the future. Riprap reduces the shoreline margin habitat and physically occupies space that could otherwise be occupied by riparian/floodplain vegetation or host macroinvertebrate prey habitat, which are essential components of a functioning stream ecosystem that supports salmonid rearing. Juvenile salmonid mortality from both native and non-native fish predators is also a factor in their populations' successful recovery in the CCV (NMFS 2014). Large piscivorous predators that utilize ambush techniques are attracted to hard surfaces with hiding spots for ambush, like stretches of riprap and artificial structures (Munsch et al. 2017). Without escapement cover like submerged vegetation or margin habitat available in the immediate vicinity, there would be a low chance of survival for targeted juveniles. Because the project design now specifically excludes the use of riprap, if in the future this section of Mormon Slough is restored and rearing juvenile steelhead become able to use the area, the proposed project will

not further reduce the ability of CCV steelhead critical habitat to provide freshwater rearing or floodplain connectivity in the action area beyond its baseline condition.

Conclusion

Based on this analysis, NMFS concurs with the Authority that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Authority, the SJRRC, or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) the proposed action causes take; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the written concurrence (specifically a design change wherein the proposed flyover design is modified to one that may affect the ability of the waterway to provide unimpeded fish passage or that alters the streambed bottom, or if water flow and volitional fish access to this section of Mormon Slough is restored before construction is complete); or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA consultation.

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. The Authority also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1), as a designated federal representative. As such, NMFS recommends that the Authority, and other railway agencies such as the SJRRC, support future flood planning decisions and conservation efforts that involve the reconnection of this section of Mormon Slough to Calaveras River and the San Joaquin River Delta, the restoration of flows, the restoration of fish passage, and habitat rehabilitation/revegetation efforts that support the life history needs and recovery of ESA-listed fishes. NMFS also recommends that the Authority and SJRRC systematically and strategically replace or retrofit existing railroad crossings, drainage structures, and associated culverts that do not currently meet NMFS fish passage criteria so that these structures enable fish passage where appropriate, and work with other railway owners and partners to do the same whenever possible.

MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT

Section 305(b) of the MSA directs Federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10). Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate

and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects may result from actions occurring within EFH or outside of it and may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH (50 CFR 600.905(b)).

NMFS concurs with the Authority's determination that the proposed action would not adversely affect Pacific Coast Salmon EFH because, as established in the Background and Action Agency's Effect Determination section, Chinook salmon are also currently unable to access this section of Mormon Slough. In its present, isolated state, this slough section is also unable to provide water, substrate, prey, or any other ecosystem constituent to Pacific Coast Salmon EFH in accessible waters downstream of the action area. The proposed action under consideration had no influence on the existing rerouting decisions that lead to Mormon Slough becoming isolated *and* building a new railroad flyover is not expected to prevent the area from serving as Pacific Coast Salmon EFH if water flow and fish passage are restored in the future. NMFS has no EFH conservation recommendations to offer the Authority or SJRRC to minimize project impacts on Pacific Coast Salmon EFH beyond those suggested above or what has already been incorporated as project modifications during the ESA consultation. However, the Authority must reinstate MSA consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH in the future, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920(1)). This concludes the MSA consultation.

Please direct questions regarding this letter to Katie Schmidt, Fish Biologist, at (916) 930-3685 or katherine.schmidt@noaa.gov.

Sincerely,



Erin Strange
San Joaquin River Basin Branch Chief

cc: To the File: 151422-WCR2018-SA00467
Mike Avina, mike.avina@hsr.ca.gov, Authority
Sue Meyer, sue.meyer@hsr.ca.gov, Authority
Scott Rothenberg, scott.rothenberg@hsr.ca.gov, Authority
Jelica Arsenijevic, jelica.arsenijevic@hdrinc.com, HDR, Inc.

References

- Authority. 2021. Informal Section 7 Consultation for the Stockton Diamond Grade Separation Project and Attachment A: Stockton Diamond Crossing Design. Dated 4/16/2021.
- Authority, SJRRC, and HDR Inc. 2021. Informal Section 7 Consultation for the Stockton Diamond Grade Separation Project, National Marine Fisheries Service Regulated Species and Habitat Memorandum and Attachments a, B, C, and D. Dated 2/25/2021. California High Speed Rail Authority.
- Munsch, S. H., J. R. Cordell, J. D. Toft, and V. Trenkel. 2017. Effects of Shoreline Armouring and Overwater Structures on Coastal and Estuarine Fish: Opportunities for Habitat Improvement. *Journal of Applied Ecology* 54(5):1373-1384.
- NMFS. 2014. Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead. National Marine Fisheries Service. West Coast Region, pp. 427.
- NMFS. 2019. Guidelines for Salmonid Passage at Stream Crossings for Applications in California at Engineered Stream Crossings to Facilitate Passage of Anadromous Salmonids. Original Issue Date: September 2001. Addendum Issue Date: September 2019. National Marine Fisheries Service, Santa Rosa, California.
- Stockton East Water District and FISHBIO. 2019. Stockton East Water District Calaveras River Habitat Conservation Plan Appendix B: Calaveras River Environment. <https://media.fisheries.noaa.gov/dam-migration/final-submittal-hcp-appendix-b-calaveras-river-environment.pdf>.
- Yim, A., W. Chiu, and H. Karlsson. 2021. Hydrologic and Hydraulic Analysis and Design Memorandum. Dated 3/5/2021. WRECO Civil Engineering, Environmental Compliance, Geotechnical Engineering, and Water Resources Consultation Services.