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Governor's Office of Planning & Research

Mark McLoughlin
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JUNE 20 2019

STATE CLEARINGHOUSE

**Subject: California High-Speed Rail Project, Merced to Fresno Section: Central Valley Wye (Project)
Draft Supplemental Environmental Impact Report (DSEIR)
SCH No. 2009091125**

Dear Mr. McLoughlin:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a DSEIR from the High-Speed Rail Authority for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW previously commented on related environmental documents including:

- Proposed California High-Speed Train System EIR/EIS on August 31, 2004.
- Bay Area to Central Valley Program Draft EIR/EIS on September 25, 2007.
- Bay Area to Central Valley Program Final EIR/EIS on July 7, 2008.
- CDFW Response to the NOP of a Project EIR/EIS for San Jose to Merced High-Speed Train System through Pacheco Pass on April 8, 2009.
- Draft Project EIR/EIS for the Fresno to Bakersfield Section on October 13, 2011.
- Draft Project EIR/EIS for the Merced to Fresno and Section 4(f) Statement on October 13, 2011.
- Revised Draft Environmental Impact Report (DEIR)/Supplemental Draft Environmental Impact Statement (DEIS) and the Biological Resources and Wetlands Technical Report for the Fresno to Bakersfield Section on September 26, 2012.
- Draft Supplemental EIR/EIS for the Fresno to Bakersfield Section on January 16, 2018.

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.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates 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 Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & Game Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Water Pollution: Pursuant to Fish and Game Code section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. It is possible that without mitigation measures implementation of the Project could result in pollution of Waters of the State from storm water runoff or construction-related erosion. Potential impacts to the wildlife resources that utilize these watercourses include the following: increased sediment input from road or

structure runoff; toxic runoff associated with development activities and implementation; and/or impairment of wildlife movement along riparian corridors. The Regional Water Quality Control Board and United States Army Corps of Engineers also have jurisdiction regarding discharge and pollution to Waters of the State.

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

PROJECT DESCRIPTION SUMMARY

Proponent: California High-Speed Rail Authority (Authority)

Objective: As part of the Merced to Fresno Section, an approximate 51- to 55-mile portion, of the statewide high-speed rail system delineated as the Central Valley Wye, would create the high-speed rail connection between the San Jose to Merced Section to the west and the north-south portion of the Merced to Fresno to the east. The DSEIR Central Valley Wye addresses four alternatives, each of which includes electrical interconnections and network. The preferred alternative stated in the DSEIR is State Route (SR) 152 north to Road 11.

Location: The proposed Merced to Fresno Section: Central Valley Wye is located in Merced and Madera Counties near the City of Chowchilla with related electrical facilities extending into Fresno and Stanislaus counties. The Project termini are located at Henry Miller Road/Carlucci Road on the west (latitude 37°5'51.46"N/longitude -120°40'48.84"W). Ranch Road/SR99 on the north (latitude 37°13'21.29"N/longitude -120°22'40.69"W), and Avenue 19 near Madera Acres on the south (latitude 37°1'31.84"N/longitude -120 4'46.61"W). The nearest major highway intersection is SR 99 and SR 152.

Timeframe: Unspecified.

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the California High-Speed Rail Authority in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

Currently, the DSEIR indicates that the Project's impacts would be less than significant with the implementation of mitigation measures described in the DSEIR. However, as currently drafted, it is unclear whether the mitigation measures described will be enforceable or sufficient in reducing impacts to a level that is less than significant. In particular, CDFW is concerned regarding adequacy of mitigation measures for special-status species including, but not limited to, the State Threatened Swainson's hawk (*Buteo swainsoni*), tricolored black bird (*Agelaius tricolor*), State Endangered and fully protected bald eagle (*Haliaeetus leucocephalus*), State and Federal Endangered Fresno kangaroo rat (*Dipodomys nitratoide exilis*), State Threatened and Federal Endangered San Joaquin kit fox (*Vulpes macrotis mutica*), State and Federal Threatened California tiger salamander (*Ambystoma californiense*) and giant garter snake (*Thamnophis gigas*), and State fully protected white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*).

I. Mitigation Measure or Alternative and Related Impact Shortcoming

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Tricolored Blackbird (TRBL)

Section 3.7.7.4 Impact BIO#11 Direct impact on Special-Status Wildlife-Birds and Impact BIO#12 Indirect impact on Special-Status Wildlife-Birds pages 75 through 77

Issue: The DSEIR acknowledges that TRBL have the potential to occur within or near the Project (CDFW 2019). The Project contains annual grasslands, dairies, pastures, wetlands, and field crops. Despite this, the DSEIR does not identify TRBL as a State Threatened species and does not include any species-specific measures for evaluating or minimizing impacts to TRBL.

Specific impact: Without appropriate avoidance and minimization measures for TRBL, potential significant impacts include nest and/or colony abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

Evidence impact would be significant: TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014). Approximately 86% of the global population is found in the San Joaquin Valley (Kelsey 2008, Weintraub et al. 2016). Increasingly, TRBL are forming larger colonies that contain progressively larger proportions of the species' total population (Kelsey 2008). In 2008, for example, 55% of the species' global population nested in only two colonies, which were located in silage fields (Kelsey 2008). In 2017, approximately 30,000 TRBL

were distributed among only sixteen colonies in Merced County (Meese 2017). Nesting can occur synchronously, with all eggs laid within one week (Orians 1961). For these reasons, depending on timing, disturbance to nesting colonies can cause abandonment, significantly impacting TRBL populations (Meese et al. 2014).

Recommended Potentially Feasible Mitigation Measure(s)

Because the DSEIR identifies the potential for TRBL to occur within Project, CDFW recommends conducting the following evaluation of the Project, updating the DSEIR to include the following measures, and that these measures be made Conditions of Approval for the Project. CDFW recommends quantitative and enforceable measures that will reduce the impacts to less than significant levels.

Recommended Mitigation Measure 1: TRBL Habitat Assessment

CDFW recommends that a qualified biologist conduct a habitat assessment of individual Project areas in advance of Project implementation, to determine if the Project area or its vicinity contains suitable habitat for TRBL.

Recommended Mitigation Measure 2: TRBL Surveys

CDFW recommends that Project activities be timed to avoid the typical bird breeding season (February 1 through September 15). However, if Project activities must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting TRBL no more than 10 days prior to the start of implementation to evaluate presence/absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

Recommended Mitigation Measure 3: TRBL Avoidance

If an active TRBL nesting colony is found during preconstruction surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer in accordance with CDFW's *Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015* (CDFW 2015b). CDFW advises that this buffer remain in place until the breeding season has ended or until a qualified biologist has determined that nesting has ceased, the birds have fledged, and are no longer reliant upon the colony or parental care for survival. It is important to note that TRBL colonies can expand over time and for this reason, the colony may need to be reassessed to determine the extent of the breeding colony within 10 days of Project initiation.

Recommended Mitigation Measure 4: TRBL Take Authorization

In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is warranted to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081(b), prior to any ground-disturbing activities.

COMMENT 2: Fully Protected Raptors

Section 3.7.7.4 Impact BIO#11 Direct Impacts on Special-Status Wildlife-Birds and Impact BIO#12 Indirect Impacts on Special-Status Wildlife-Birds pages 75 through 78 and BIO-MM#24 page 127

Issue: The State fully protected white-tailed kite, the State fully protected golden eagle, and State Endangered and fully protected bald eagle are known to occur within the vicinity of the Project (CDFW 2019). The DSEIR acknowledges the presence of suitable habitat for these species within the Project area but does not contain any species-specific measures to minimize the Project's impacts on fully protected raptors. The DSEIR does not describe how the preferred alternative has the least extensive direct impacts in comparison to the other alternatives. The CEQA conclusion for direct and indirect impacts does not address these fully protected species. BIO-MM#24 combines pre-construction surveys and monitoring for all raptors including the State fully protected species, however this mitigation measure should separate out the fully protected species. Without appropriate mitigation measures, Project activities conducted within occupied territories have the potential to significantly impact these species.

Specific Impacts: Potentially significant impacts that may result from new ground disturbing activities include nest abandonment, loss of nest trees, and/or loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality.

Evidence impact would be significant: The Project will involve noise, groundwork, and use of heavy machinery that may occur directly adjacent to large trees with potential to serve as nest trees for fully protected raptors.

Recommended Potentially Feasible Mitigation Measure(s)

Because the DSEIR identifies the potential for fully protected raptors to occur in the Project area, CDFW recommends, updating the DSEIR to include the following measures, and that these measures be made Conditions of Approval for the Project. CDFW recommends quantitative and enforceable measures that will reduce the impacts to less than significant levels.

Recommended Mitigation Measure 5: Fully Protected Raptor Habitat Assessment

CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project or the vicinity (within ½-miles) contains suitable habitat for fully protected raptors.

Recommended Mitigation Measure 6: Fully Protected Raptor Surveys

If suitable habitat is present, CDFW recommends that focused surveys be conducted by experienced biologists at individual Project sites prior to Project implementation. To avoid impacts to these species, CDFW recommends conducting these surveys in accordance with protocols developed by CDFW (CDFG 2010) and the USFWS (USFWS 2010). If Project activities are to take place during the normal bird breeding season (March 1 through September 15), CDFW recommends that additional pre-construction surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of construction.

Recommended Mitigation Measure 7: Fully Protected Raptor Avoidance

In the event that special-status raptor species are found within ½-mile of Project sites, implementation of avoidance measures is warranted. CDFW recommends that a qualified wildlife biologist be on-site during all ground-disturbing/construction-related activities and that a ½-mile no-disturbance buffer be put into effect. If the ½-mile no-disturbance buffer cannot feasibly be implemented, contacting CDFW to assist with providing and implementing additional avoidance measures is recommended. Fully addressing mitigation measures for fully protected raptor species in the CEQA document prepared for the Project is recommended.

COMMENT 3: California Tiger Salamander (CTS)

Section 3.7.8 Biological Resources and Wetlands; Mitigation Measures BIO-MM#11 and #12; pages 121 through 122

Issue: CTS are known to occur in the vicinity of the Project (CDFW 2019). The DSEIR, as currently drafted, includes measures that may not be enforceable or adequate in avoiding, minimizing, or mitigating the impacts to CTS to a level that is less than significant or that may themselves result in take. In addition, there are no details on how avoidance of take would be achieved. For example, BIO-MM#12 requires installation of wildlife exclusion fencing around the Project, which indicates that there is potential for special-status amphibians to be within the Project site. There are no avoidance buffers stated in the measures for potential burrow avoidance within the Project. CDFW recommends that avoidance buffers from potentially occupied burrows be added to BIO-MM#12.

Specific Impacts: The proposed Project is within the vicinity of both upland and breeding habitat. Due to the potential ground-disturbing activities, potential Project-related impacts include but are not limited to the following: collapse of small mammal burrows, inadvertent entrapment, loss of upland refugia, water quality impacts to breeding sites, reduced reproductive success, reduction in health, and direct mortality of individuals.

Evidence impact would be significant: Up to 75% of historic CTS habitat has been lost to development (Searcy et al. 2013). Loss, degradation, and fragmentation of habitat are the primary threats to CTS. Contaminants and vehicle strikes are also sources of mortality for the species (CDFW 2015a, USFWS 2017a). The Project area is within the range of CTS and numerous Project sites are within and surrounded by suitable habitat (i.e., aquatic breeding habitat, grasslands interspersed with burrows). CTS have been determined to be physiologically capable of dispersing up to approximately 1.5 miles from seasonally flooded wetlands (Searcy and Shaffer 2011) and have been documented to occur near the Project sites (CDFW 2019). Given the presence of suitable habitat surrounding the Project sites, Project activities have the potential to significantly impact local populations of CTS.

Recommended Potentially Feasible Mitigation Measure(s)

Because suitable habitat for CTS is present throughout the Project area, CDFW recommends conducting the following evaluation of the Project area, revising the DSEIR to include the following measures, and that these measures be made Conditions of Approval for the Project.

Recommended Mitigation Measure 8: Focused CTS Site Assessment and Survey

CDFW recommends that a qualified biologist assess Project area and vicinity (i.e., up to 1.5 miles, observed CTS dispersal distance) to evaluate the potential for CTS. CDFW recommends site assessments follow the USFWS "Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander" (USFWS 2003). CDFW recommends the qualified biologist determine the impacts of Project-related activities to all CTS upland and breeding habitat features within and/or adjacent to the construction footprint.

If, following the site assessment, it is determined there is suitable habitat present for breeding or upland refugia on the Project site, protocol-level surveys are advised to be conducted in accordance with the USFWS' Interim Guidance document (USFWS 2003). CDFW recommends that survey findings be submitted for review. In order for a negative finding for CTS to be accepted, CDFW must make a determination

whether it will accept negative findings based on whether there has been sufficient rainfall. In addition, acceptance of a negative finding for CTS requires protocol-level surveys for two consecutive wet seasons.

Recommended Mitigation Measure 9: CTS Avoidance

CDFW advises that a minimum 50-foot no-disturbance buffer be delineated around all small mammal burrows in suitable habitat and occupied breeding pools within and/or adjacent to the Project sites' construction footprints. CDFW also recommends avoiding any impacts that could alter the hydrology or result in sedimentation of breeding pools. If avoidance is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take.

Recommended Mitigation Measure 10: CTS Take Authorization

If through surveys it is determined that CTS are occupying or have the potential to occupy the Project area and take of the species cannot be avoided, acquisition of take authorization would be warranted prior to initiating ground-disturbing activities. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b). Alternatively, in the absence of protocol surveys, the applicant can assume presence of CTS within the Project area and obtain an ITP from CDFW.

COMMENT 4: Giant Garter Snake (GGS)

Section 3.7. Biological Resources; Mitigation Measures BIO-MM#19-22; pages 125-126.

Issue: The DSEIR acknowledges that GGS has the potential to be present in or near the Project. As documented in the California Natural Diversity Database (CNDDDB), GGS are known to occur in the San Joaquin River and tributaries that feed into the San Joaquin River in Merced County (CDFW 2019). Despite this, the DSEIR, as currently drafted, includes measures that may not be enforceable or adequate in avoiding, minimizing, or mitigating impacts to a level that is less than significant or that may themselves result in take. In addition, BIO-MM#19 requires installation of protective environmental fencing along Project site perimeters, which could result in take, resulting from capture, of GGS within the fenced Project area.

Specific Impacts: Potentially significant impacts associated with bridge or culvert construction/replacement include burrow excavation and collapse, inadvertent entrapment, and direct mortality of individuals.

Evidence impact would be significant: Currently, GGS are isolated to only nine disjunct populations. At the time of the species listing under the Federal

Endangered Species Act in 1993, the USFWS recognized 13 populations. Since then, two of these populations have been determined to be extirpated (USFWS 2017b). Habitat loss and fragmentation are the primary threats to GGS. Only 5% of the species' historic wetland habitat acreage remains. In addition, Central Valley populations of GGS are also susceptible to roads, vehicular traffic, and non-native species impacts (USFWS 2017b). The species has specific seasonal habitat requirements. During the summer months, GGS require aquatic habitat for foraging and adjacent upland areas with emergent vegetation for basking sites (USFWS 2017b). During periods of inactivity, GGS require burrows in upland habitat as refugia for summer shelter and burrows in higher elevation uplands for winter hibernation (Hansen et al. 2015). The Project as proposed consists of ground-disturbing activities. These activities have the potential to result in excavation and collapse of GGS refugia and may result in a violation of CESA if GGS is are present.

Recommended Potentially Feasible Mitigation Measure(s)

Because the DSEIR identifies the potential for GGS to occur on the Project, CDFW recommends conducting the following evaluation of individual Project area, revising the DSEIR to include the following measures, and that these measures be made Conditions of Approval for the Project.

Recommended Mitigation Measure 11: GGS Habitat Assessment

CDFW recommends that a qualified biologist conduct a habitat assessment of individual Project areas in advance of Project implementation, to determine if the Project area or its vicinity contains suitable habitat for GGS.

Recommended Mitigation Measure 12: GGS Surveys and Avoidance

If suitable habitat is present, CDFW recommends, no more than 30 days prior to ground disturbing activities, a qualified biologist with GGS experience and knowledge of its ecology, survey the work area and a minimum 50-foot radius of the work area for burrows and crevices in which GGS could be present. It is advised that all potentially suitable burrows and crevices be flagged and avoided by a minimum 50-foot no-disturbance buffer. If a 50-foot radius buffer isn't feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take of the species.

Recommended Mitigation Measure 13: GGS Take Authorization

Capture and relocation of any species listed under CESA would require an ITP from CDFW, as capture (or attempt to do so) is defined as take under Fish and Game Code section 86. If take cannot be avoided, take authorization through acquisition of

an ITP, pursuant to Fish and Game Code section 2081(b) would be necessary to comply with CESA.

COMMENT 5: Swainson's Hawk (SWHA)

**Section 3.7.8 Biological Resources and Wetlands; Mitigation Measures
BIO-MM#26-28; pages 128 through 129 and BIO-MM#50 page 138.**

Issue: SWHA have the potential to nest within and in the vicinity of the Project. In addition, as described in the DSEIR, foraging habitat for SWHA exists within and in the vicinity of the Project area: The Project area is surrounded by annual grasslands and croplands that may be used for foraging. The CNDDDB shows SWHA occurrences throughout Fresno, Madera, and Merced counties (CDFW 2019). CDFW acknowledges that BIO-MM#26 requires a pre-activity survey for suitable SWHA nesting habitat. This measure also requires a no-disturbance buffer in consultation with CDFW should an active nest be found. However, the DSEIR should define the restrictive buffer size, in BIO-MM#27, or provide provisions for consulting with CDFW on whether take avoidance can occur should implementation of the buffer not be feasible. BIO-MM#28 indicates that there will be no compensation for the removal of known nesting trees outside of the nesting season. For these reasons, as currently drafted, the provisions described in this measure may not be enforceable or adequate in minimizing impacts to SWHA to a level that is less than significant.

Specific impacts: Without appropriate avoidance and minimization measures for SWHA, potential significant impacts that may result from Project activities include nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality. Any take of SWHA without appropriate incidental take authorization would be a violation of Fish and Game Code.

Evidence impact is potentially significant: SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley limits their local distribution and abundance (CDFW 2016). The Project as proposed will involve noise, groundwork, use of heavy machinery, and high levels of human activity from construction workers that could affect nests and has the potential to result in nest abandonment, significantly impacting nesting SWHA in the Project vicinity. The mature trees and agricultural fields in the Project vicinity provide suitable nesting and foraging habitat. CDFW considers removal of known bird-of-prey nest trees, even outside of the nesting season, a potentially significant impact under CEQA, and in the case of SWHA, it could also result in take under CESA.

Recommended Potentially Feasible Mitigation Measure(s)

Because suitable habitat for SWHA is present throughout the Project area, CDFW recommends revising the DSEIR to include the following measures and that these measures be made Conditions of Approval for the Project.

Recommended Mitigation Measure 14: SWHA Habitat Assessment

CDFW recommends that a qualified biologist conduct a habitat assessment of individual Project areas in advance of Project implementation, to determine if the Project area, or in the Project vicinity, contain suitable habitat for SWHA.

Recommended Mitigation Measure 15: Focused SWHA Surveys

If suitable habitat is present, in order to evaluate potential impacts, CDFW recommends that a qualified biologist conduct surveys for nesting SWHA following the survey methods developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC 2000) prior to Project implementation. The survey protocol includes early season surveys to assist the project proponent in implementing necessary avoidance and minimization measures, and in identifying active nest sites prior to initiating Project activities. If Project activities are to take place during the normal bird breeding season (March 1 through September 15), CDFW recommends that additional pre-construction surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of construction.

Recommended Mitigation Measure 16: SWHA Avoidance

If an active SWHA nest is found, CDFW recommends implementation of a minimum ½-mile no-disturbance buffer around active nests 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 parental care for survival.

Recommended Mitigation Measure 17: SWHA Nest Tree Mitigation

SWHA exhibit high nest-site fidelity year after year and CDFW considers removal of known SWHA nest trees, even outside of the nesting season, a potentially significant impact under CEQA. Regardless of nesting status or tree species, if potential or known SWHA nest trees are removed, CDFW recommends they be replaced with an appropriate native tree species, planted at a ratio of 3:1, in an area that will be protected in perpetuity, to reduce impacts to SWHA from the loss of nesting habitat.

Recommended Mitigation Measure 18: Compensation for Loss of Foraging Habitat

If SWHA nests occur in the vicinity of the Project area, CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's Staff Report Regarding Mitigation for Impacts to SWHA (DFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

- For projects within 1 mile of an active nest tree, a minimum of one acre of habitat management (HM) land for each acre of development is advised.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of 0.75 acres of HM land for each acre of development is advised.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of 0.5 acres of HM land for each acre of development is advised.

Recommended Mitigation Measure 19: SWHA Take Authorization

If SWHA are detected and the ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization through acquisition of an ITP, pursuant to Fish and Game Code section 2081(b) is necessary to comply with CESA.

II. Editorial Comments and/or Suggestions

Nesting birds: CDFW encourages Project implementation occur during the bird non-nesting season. However, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February through mid-September), the Project's applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance 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. In addition to direct impacts (i.e., nest destruction), noise, vibration, high levels of human activity, and movement of equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends a qualified biologist conduct a survey to

establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends the work causing that change cease and that CDFW be consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, 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 parental care for survival. Smaller no-disturbance buffers may still be adequately protective when there is compelling biological or ecological reason for a modified buffer, such as when the construction area would be concealed from a nest site by topography.

Lake and Streambed Alteration: Project-related activities have the potential to substantially change the bed, bank, and channel of wetlands and waterways onsite, which are subject to CDFW's regulatory authority pursuant Fish and Game Code section 1600 et seq., therefore notification is warranted. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration Agreement (Agreement); therefore, if the CEQA document approved for the Project does not adequately describe the Project and its impacts, a subsequent CEQA analysis may be necessary for Agreement issuance. For additional information on notification requirements, please contact our staff in the Lake and Streambed Alteration Program at (559) 243-4593.

Wildlife Corridor Movement: CDFW has provided comments to the Authority in previous comment letters regarding wildlife corridor movement; specifically, the Merced to Fresno DEIR/EIS comment letter and the Fresno to Bakersfield SEIR/EIS comment letter.

As CDFW has discussed in the previous comment letters to the Authority, the single biggest potential biological impact arising from construction of the High-Speed Rail (HSR) project is the impact on regional movements of wildlife and connections between habitat. The HSR has the potential to disrupt wildlife movement corridors that are already hindered with existing obstacles, create long stretches of impediments, and

further narrow areas of low or compromised permeability, many of which are already threatening the continued viability of several species. Construction of access-controlled rail lines may create barriers to the movement of wildlife, thereby cutting them off from important food, shelter, and breeding areas. As CDFW has stated in its previous comment letters, the isolation of subpopulations limits the exchange of genetic material and puts populations at risk of local extirpation through genetic and environmental factors. Barriers can prevent the re-colonization of suitable habitat following natural population expansions, ultimately putting the species at risk of extinction.

The construction and operation of the HSR will severely inhibit north-south as well as east-west wildlife movement along the Central Valley Wye segment. While the Authority suggests it will examine the feasibility of implementing a variety of wildlife passages to aid animal movement along both sides of the rail alignment, it is unclear where and at what intervals these will be placed. This is a concern, especially considering recent design changes in the Fresno to Bakersfield segment of the Project where originally designed elevated structures are being changed to an at-grade design and elevated structures over waterways are being significantly reduced in length, narrowing the available space for wildlife passage. This could limit the ability of species such as San Joaquin kit fox to move unimpeded throughout its historic range.

These types of potential future design changes need to be considered in the DSEIR. An elevated or below ground rail design could reduce the impacts that the HSR system would have on animal movement and migration by allowing wildlife to pass unimpeded underneath or over the top of the entire length of the railway while providing access-controlled tracks. Elevated or below ground railways would be more effective in facilitating animal movement than the proposed wildlife underpasses and overpasses, which are not always effective. Because animals would be more likely to move underneath an elevated rail or over a below ground rail than to use a tunnel or vegetated overpass where the landscape view of the opposite side would be visually obstructed, CDFW advises the inclusion of the at-grade embankment in the DSEIR as an impact to wildlife movement and that this impact be thoroughly analyzed as a barrier to movement, gene flow, reproductive success, loss of colonization opportunities, and to discuss this in the context of planned wildlife crossings.

The DSEIR does not analyze the impact of design elements, such as the IPBs and Access Restriction (AR) fencing, in terms of impacts to wildlife corridor movements and/or the reduction of effectiveness of wildlife crossings compounded by the additional infrastructure fencing.

If wildlife passage structures will be used instead of elevated rail, CDFW continues to recommend that an extensive evaluation be conducted before final wildlife passage locations are selected, to determine the appropriate and most effective locations, and number and types of such wildlife passage structures. As was recommended in previous correspondence, methods to determine best locations of wildlife passage

structures or avoidance should include things such as: 1) track station surveys, 2) ditch crossing surveys, 3) monitoring trails with infrared or Trailmaster cameras, and 4) Geographic information system (GIS) habitat modeling to identify likely wildlife travel corridors and anthropogenic barriers (such as highways, canals, reservoirs) at the landscape level. In addition, wildlife habitat passage structures, such as underpasses, overpasses, elevating or placing below grade the alignment and tunnels, may not be suitable for all species and locations and would need to be evaluated carefully. Dedicated wildlife crossing structures should ensure permeability and be required to meet specific minimum dimensions for increased probability of wildlife utilizing these structures for crossing opportunities.

COMMENT 6: Section 3.7.1 Definition of Resources: California Fish and Game Code Section 1600 et. Seq. Rivers, Lakes and Streams Page 4

Fish and Game Code section 1602 applies to any river, stream lake including those that are episodic as well as perennial. This includes ephemeral streams, desert washes, watercourses with subsurface flow. It may also apply to work undertaken within the floodplain of a body of water. The definition provided in the DSEIR does not encompass all streams that may be impacted in the Project area; therefore, CDFW advises the definition of stream in the DSEIR be modified to incorporate sufficient parameters that these waterways will be captured by the definition and into analyzing impacts to CDFW jurisdictional waterways.

COMMENT 7: Section 3.7.5.3 Special-Status Plant Species Page 20

The literature review for special-status plant species in the DSEIR stated the California Natural Diversity Database (CNDDDB)/Rarefind and California Native Plant Society (CNPS) programs were used to identify potential and known special-status species. CDFW would like to state that while both CNDDDB/Rarefind and CNPS programs are excellent tools, the databases are populated through voluntary submittal of positive detections and therefore are only as effective as the information included/submitted. Thus, areas of un-surveyed land may have undocumented occurrences of special-status species and special-status plant communities. As a result, it is expected that the outcome of the query underestimates the locations and probable detections of special-status species and plant communities within and adjacent to the proposed construction footprint.

COMMENT 8: Section 3.7.5.3 Special-Status Wildlife-CNDDDB Page 20

The CNDDDB species list was generated in 2016 for the DSEIR; however, since then, the species listings have been updated. It should also be noted that while both CNDDDB/Rarefind programs are excellent tools, the databases are populated through voluntary submittal of positive detections and therefore are only as effective as the information included/submitted. Thus, areas of un-surveyed land may have

undocumented occurrences of special-status species. As a result, it is expected that the outcome of the query underestimates the locations and probable detections of special-status species within and adjacent to the proposed construction footprint.

COMMENT 9: Section 3.7.5.3 Field Surveys Page 23

Approximately 13% of the property was surveyed for presence of biological resources. Because much of the area could not be surveyed, the Authority should assume presence in all areas of potential habitat including certain agricultural areas and include avoidance, minimization, and mitigation measures to reduce impacts. Access achieved was insufficient to adequately analyze resource potential and to conclude the quality of the habitat conditions.

COMMENT 10: Section 3.7.5.3 Reconnaissance Survey Pages 23-24

Windshield surveys along existing roads were conducted for wildlife habitat assessments. Please note that this level of surveys, due to the lack of access and the deficiency of discrete timing to ensure maximum detectability, are inadequate to make an effective determination regarding resource presence or absence, particularly in regards to wetlands.

COMMENT 11: Section 3.7.5.3 San Joaquin Restoration Program, Page 27

The DSEIR states, "Prior to interim flows, the reach between Friant Dam and the Mendota Pool rarely sustained flows conducive to the Chinook salmon life cycle (USBR and DWR 2011)". CDFW recommends expanding the statement to include the following: Prior to interim flows, the reach between Friant Dam and the Mendota Pool rarely sustained flows conducive to the Chinook salmon life cycle *following the completion of Friant Dam* (USBR and DWR 2011).

COMMENT 12: Section 3.7.6.1 Plant communities and Land Cover Page 30

The DSEIR indicates that urban areas in the communities of Merced, Chowchilla and Madera have highly disturbed areas that consist of plants such as *Eucalyptus* spp. Eucalyptus tree species have the potential to provide nesting habitat for SWHA in these urban areas. CDFW recommends that ornamental tree species be carefully considered to effectively analyze the State Threatened SWHA which regularly use eucalyptus ornamentals for nest trees and advises analyzing the impacts to SHWA in these urban areas.

COMMENT 13: Section 3.7.6.2 Native Fauna Page 35

The DSEIR indicates that the focus of the impact analysis is on special status species. However, CEQA and NEPA² requires that the assessment include significant impacts to all biological resources and is not limited to special status species. Please explain if any significant impacts to non-listed species could result from this Project (e.g., impacts restricting the movement of common wildlife species, etc.). There is no identified avoidance, minimization measures for non-listed species within the DSEIR.

Comment 14: Section 3.7.6.4 Special Status Plant Communities Page 41

The DSEIR analysis lacks consideration as to the secondary benefits of plant communities. It should be noted riparian areas help reduce solar input that cause water temperatures to rise as well as adding stability to riverbanks which reduces erosion.

COMMENT 15: Section 3.7.6.4 Aquatic Habitats, Non-Wetland Waters Page 44

The DSEIR indicates that constructed watercourses offer few biological resources to plants and wildlife. However, these areas can, and often do, support wildlife and wildlife use for foraging, dispersal, breeding, and refugia habitat. Impacts to these areas need to be analyzed. It should be noted that the non-wetland waters that are classified as constructed waterways (ditches and canals) also could be subject to Fish and Game Code section 1602.

COMMENT 16: Section 3.7.6.4 Habitats of Concern: Essential Fish Habitat (EFH) Page 46

The DSEIR indicates that restored flows are part of the San Joaquin River Restoration Program (SJRRP); however, there can be surface water flows downstream of Gravelly Ford and Mendota Pool apart from flood flows. It should be noted that the temporary fish barrier in place upstream of the confluence of the San Joaquin River and Merced River does not completely prevent passage/migration of anadromous fish into the San Joaquin River. In fact, CDFW routinely captures salmon upstream of this barrier. This barrier should not be considered as a factor in reducing impacts to less than significant. CDFW advises to consider this in the analysis of impacts to EFH.

EFH in the habitat study area for all Central Valley Wye alternatives is not only limited to the San Joaquin River, returning adult Chinook salmon as well as out-migrating juveniles could occupy the Chowchilla bypass as well.

The summary of SJRRP fish reintroduction efforts in the DSEIR is incorrect. Adult Broodstock Releases to Reach 1A was not limited to 2016 but continues as a research

² See CEQA Guidelines Appendix G, IV. Biological Resources (d), XVIII. Mandatory Findings of Significance (a), and NEPA regulation 40 C.F.R. § 1502.3.

study and possible reintroduction strategy. In 2016, 25 adult spring-run were released to Reach 1A, 115 adult spring-run in 2017, and 179 in 2018. The first observed spring-run redds from these releases occurred in 2016 with three redds observed. In 2017, 13 redds were observed and in 2018, 42 redds were observed during surveys. Releases of juvenile spring-run Chinook salmon to the San Joaquin have occurred each year since 2014. The statement "In 2017, nearly 90,000 juveniles were released resulting in the first successful spawning of spring-run Chinook salmon in over 60 years" is factually incorrect and implies that the juveniles released from the Salmon Conservation and Research Facility(SCARF) and Satellite Incubation and Rearing Facility(SIRF) were naturally spawned fish.

COMMENT 17: Section 3.7.6.4 Wildlife Movement Corridor Page 47

The Pacific flyway is mentioned as spanning the wildlife movement study area; however there is a lack of analysis of the direct and indirect impacts to the Pacific flyway in the document. CDFW recommends addressing the project impacts (e.g., noise, vibration, bisection of habitats, fragmentation, bird strikes, lighting, etc.) to the Pacific flyway and incorporating necessary avoidance, minimization and mitigation measures.

COMMENT 18: Section 3.7.6.6 Condition Assessments and Watershed Profile Page 49-50

The DSEIR lacks analysis on how the alternatives would impact the function of the watershed. It is unclear if the Project would impact the watershed as a whole. CDFW recommends further analysis of the potential impacts and consideration of potential impacts to Ash Slough-Merced National Wildlife Reserve and the Grasslands Ecological Area (GEA), located to the west of the Project which could have watershed connectivity.

COMMENT 19: Section 3.7.7.4 Impact BIO#1 Direct Impacts on Special Status Plant Species Page 52-56

As stated in the DSEIR, the entire special-status plant study area was not surveyed due to limited permission to enter privileges. This effort is inadequate to effectively draw any final conclusions of the extent where special-status plant communities could occur, whether impacts to these communities have been adequately analyzed, and whether the impacts are potentially significant. It should also be noted that temporary impacts require further analysis since these temporary impacts are significant.

COMMENT 20: Section 3.7.7.4 CEQA Conclusion: Analysis of Indirect Impacts and Significance Determination (Impact BIO#4, 6, 8, 10, 12, 14, 18, 20, 22, 29, 30, 38 Pages 68-105 and Table 3.7-19 Pages 151-157)

Determination of indirect impacts within the CEQA conclusion for BIO Impacts #s 4, 6, 8, 10, 12, 14, 18, 20, 22, 29, 30, and 38 all state that impacts are less than significant

due to the design features that provide impact avoidance and minimization measures (IAMF) that are in place. Significance determination must be made independently of the avoidance, minimization, and/or mitigation measures. CEQA Guidelines³ section 15126.2 *Consideration and Discussion of Significant Environmental Impacts*, does not indicate that determination of significant environmental impact is to be based on the avoidance and minimization measures and/or mitigation.

COMMENT 21: Section 3.7.7.4 Impact BIO#5 Direct Impact on Special Status Wildlife-Fish Page 69

The DSEIR addresses disturbance due to sound levels from pile driving in analyzing direct impacts to special-status fish. It should be noted that if this disturbance occurs during critical fish migration periods and if duration and intensity from pile driving is high enough, migration could be disrupted and possibly prevented as a result. There is insufficient information presented to determine if this impact was appropriately analyzed. There are also no mitigation measures mentioned to reduce sound impacts to fish or other aquatic species during construction. CDFW recommends that this be further analyzed.

The DSEIR states, "the Authority and the project biologist would consult with the National Marine Fisheries Service (NMFS) and CDFW to identify appropriate work windows for federally listed species, including federally listed fish in the San Joaquin River"; however, the language implies the work window was recognized by NMFS as June 15 to September 15, with an extension to October 15. CDFW recommends implementation of the original shorter work window (June 15 to September 15) for in-river work as adult fall-run Chinook salmon could be migrating through the Project footprint (in some years) as early as October. The referenced October 15 extension was provided to the Authority under the Merced to Fresno ITP, based on real-time survey information collected and conveyed by NMFS and CDFW, specific to the year in which it was provided. Based on annual environmental influences effecting timing of migration, work windows may be as short as 3 to 4 months. The likelihood of construction occurring outside of the identified work window is highly probable; however, this requires analysis and additional measures to reflect these potentially adjusted work windows.

It is unclear in the document what the resource agency standards or Standard Operation Procedures (SOPs) that would be followed in the event of a fish rescue inside the cofferdam, CDFW recommends incorporating them into IAMFs and/or mitigation measures.

³ 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.

The DSEIR states, "There would not be a substantial adverse effect from habitat degradation or modification on special-status fish". This assumption is based on anecdotal generalities and fails to consider long-term impacts should migration be prevented or hindered over the course of the construction period. Multiple years of adults or juvenile Chinook salmon not reaching the ocean or spawning grounds could have negative impacts to the restoration of the San Joaquin River population.

It should also be noted that Kern Brook lamprey are endemic to the San Joaquin River and while they are not federally or state listed; under the International Union for Conservation of Nature (IUCN) Red List category, Kern Brook Lamprey are listed as Vulnerable (NatureServe, 2013) and attributes habitat degradation and loss due to dams and diversions as the leading causes of populations being fragmented. Should only Federal-listed species be considered, Kern Brook Lamprey in the project area could be negatively impacted if overlooked. CDFW recommends that impacts to non-special status fish species be addressed.

COMMENT 22: Section 3.7.7.4 Impact BIO#13 Direct Impacts and BIO#14 Indirect Impacts Ringtail Page 79 and 81

Ringtail is a fully protected mammal under Fish and Game Code and it should be stated in addressing the direct and indirect impacts. The heading for ringtail should indicate that the species is fully protected. CDFW recommends updating the DSEIR to reflect that protected status.

COMMENT 23: Section 3.7.7.4 Impact BIO#17 Direct Impacts on Jurisdictional Aquatic Resources Page 86

The DSEIR indicates the design features of the Central Valley Wye would avoid, minimize or preclude altering impacts. It is unclear how impacts would be precluded in implementing design features and how the implementation would effectively avoid and minimize with the lack of specific enforceable measures.

COMMENT 24: Section 3.7.7.4 Impact BIO#17 Direct Impacts on Jurisdictional Aquatic Resources Page 89

In subsection *California Fish and Game Code Section 1600 et. Seq. Rivers, Lakes and Streams (including riparian areas)*, CDFW advises to include direct impacts to constructed or modified waterways, as Project activities have the potential to be jurisdictional for CDFW.

COMMENT 25: Section 3.7.7.4 Impact BIO#22 Direct Impact on Essential Fish Habitat, Page 92; Impact BIO #43 Direct Impact on Essential Fish Habitat Page 108

The DSEIR states, "EFH in the San Joaquin River in the habitat study area for the Central Valley Wye alternatives has historically been poor quality". It should be noted that historically the San Joaquin River supported one of the largest populations of spring-run Chinook salmon in the State. CDFW advises to exclude using "historically" and better describe in this analysis the habitat degradation of the San Joaquin River over the last half century.

This CEQA conclusion appears to contradict the CEQA conclusion made for Impact BIO#6 Indirect Special-status fish (less than significant). Here the CEQA conclusion is "significant" for impacts on EFH. The conclusion for both CEQA Conclusions should be significant impact.

COMMENT 26: Section 3.7.7.5 Impact BIO#39 and #40 Pages 105-106

It should be noted, for direct and indirect, and impacts for ongoing maintenance work for activities within waterways, an Agreement may be required per Fish and Game Code section 1602.

COMMENT 27: Section 3.7.8 BIO-MM#1: Conduct Protocol Level Pre-Construction Surveys for Special Status Plant Species and Special-Status Plant Communities Page 110

CDFW advises that the areas where special-status plant surveys were conducted in 2015 (during a drought year) should be resurveyed during appropriate blooming periods prior to construction to ensure impacts to special-status plants will be avoided. If suitable habitat is present, CDFW recommends that the Project area be surveyed for special-status plants by a qualified botanist following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities" (CDFW 2018). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. In the absence of protocol-level surveys being performed, additional surveys may be necessary.

A separate measure for avoidance of special-status plant species is needed. The avoidance measure should contain an enforceable buffer restriction for special status plants. CDFW advises that special-status plant species be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

Comment 28: Section 3.7.8 BIO-MM#2: Prepare and Implement Plan for Salvage, Relocation, and/or Propagation of Special-Status Plants Species page 110 and BIO-MM#45: Compensate for Impacts on Special Status Plant Species page 136

Both mitigation measures lack the requirement of obtaining an ITP for salvage and relocation efforts for special status plant species. CDFW recommends that if a plant species listed pursuant to CESA or the Native Plant Protection Act is identified during botanical surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization prior to any ground-disturbing activities may be warranted. Take authorization would occur through acquisition of an ITP, pursuant to Fish and Game Code section 2081(b).

COMMENT 29: Section 3.7.8 BIO-MM#8: Implement Fish Rescue Plan inside Cofferdam Page 120

Only water depth is considered in monitoring for fish rescue. Other water quality parameters should be monitored (e.g., temperature and dissolved oxygen). This measure should address the maximum time that fish will be kept within the cofferdam before relocation and if the entire channel is dewatered during the migration periods measures that will be taken to move fish above or below the construction area. CDFW advises the Authority to present designs for the San Joaquin River, Chowchilla Bypass, and the Eastside Bypass crossings to NMFS and SJRRP.

COMMENT 30: Section 3.7.8 BIO-MM#18: Implement Western Pond Turtle Avoidance and Relocation Page 127

The measure lacks any specific avoidance buffers and distance for relocation. The measure should be enforceable.

COMMENT 31: Section 3.7.8 BIO-MM#25: Bird Protection Page 127

BIO-MM#25 will require, prior to construction, the Project biologist to check all final design to ensure features discourage perching and collisions of birds and raptors; however, CDFW advises that this measure include bird strike frequency monitoring as well as monitoring the effectiveness of the deterrent used in the mitigation measure.

COMMENT 32: Section 3.7.8 BIO-MM#29: Conduct Protocol Level Surveys for Burrowing Owl and BIO-MM#30: Burrowing Owl Avoidance and Minimization page 129-130

CDFW recommends including a separate measure for eviction and relocation of burrowing owl (BUOW). BIO-MM#30 describes eviction of burrowing owls outside of nesting season and passive relocation in accordance with CDFW 2012 guidelines. It should also be noted that passively relocating and excluding BUOW in and of itself is an

impact. The mitigation measure also doesn't specify at what time of year passive relocation would occur. Potentially significant direct impacts associated with eviction and passive relocation of BUOW includes inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals. Indirect impacts associated with temporary or permanent closure of burrows include increased stress and competition.

CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of a minimum 1 burrow collapsed to 1 artificial burrow constructed (1:1) as mitigation for the potentially significant impact of evicting BUOW. In addition, CDFW further recommends that burrow closure be employed only where there are adjacent natural burrows and sufficient non-impacted habitat for BUOW to occupy with permanent protection mechanisms in place. In addition, BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance of the Project site during project activities, at a rate that is sufficient to detect BUOW if they return.

COMMENT 33: Section 3.7.8 BIO-MM#31: Conduct Pre-Construction Surveys for Special Status Bats Page 131

CDFW advises that to ensure significant impacts are not overlooked and that the pre-construction surveys be more than one day and one night, and at different times of the year to see what species of bats are present on bridges, abandoned buildings, and trees.

COMMENT 34: Section 3.7.8 BIO-MM#34: Conduct Pre-Construction Surveys for American Badger and Ringtail Page 131

BIO-MM#34 states that the measure would guide future protective avoidance and relocation. Mitigation measure for ringtail, a fully protected species, needs to be for avoidance only. This mitigation measure suggests relocating ringtail; however, any form of take of this species is not permissible and would be a violation of Fish and Game Code. Please note that measures to protect ringtails cannot include relocation. BIO-MM#34 combines pre-construction surveys and monitoring for American badger and ringtail, this measure should separate out ringtail as a fully protected species. It should also be noted, ringtail detection during pre-construction surveys warrants consultation with CDFW to discuss how to avoid take.

COMMENT 35: Section 3.7.8 BIO-MM#39: Install Flashing or Slats within Security Fencing Page 133

BIO-MM#39 will require installation of security fencing enhanced with flashing slates to prevent special-status reptiles and mammals from entering the right-of-way; however,

CDFW advises that this measure should include mammal strike frequency monitoring as well as monitoring the effectiveness of this fence design as a deterrent.

COMMENT 36: Section 3.7.8 BIO-MM#40: Conduct pre-construction Surveys for Giant Kangaroo Rat, Nelson's Antelope Ground Squirrel, and Fresno Kangaroo Rat Pages 133-134

BIO-MM#40 indicates that live trapping would be used to survey areas within the footprint where these species may occur. If burrow avoidance is not feasible, CDFW recommends that focused protocol-level trapping surveys be conducted by a qualified wildlife biologist that is permitted to do so by both CDFW and USFWS well in advance of any ground-disturbing activities. CDFW also advises that survey results be submitted to CDFW and USFWS for review. Further, if one of these species is detected within the Project area either during protocol-level or preconstruction surveys or during construction activities, all Project activities need to cease and consultation with CDFW is advised to determine if full avoidance can occur. If not, acquisitions of an ITP pursuant to Fish and Game Code section 2081(b) would be warranted. Please be advised that relocation efforts to minimize the impact of the taking would be required and compensatory mitigation would be required to fully mitigate for the species.

In addition, the Fresno kangaroo rat (*Dipodomys nitratooides exilis*, FKR) has not been observed since 1992, when a single male was captured at CDFW's Alkali Sink Ecological Reserve (USFWS 1998). The Project area is not only considered historical habitat for this species, but much of the remaining grassland, alkali sink and chenopod sink scrub habitat remaining in western Madera County is also thought to have the highest potential for containing an extant population of FKR (USFWS 1998).

Therefore, CDFW recommends that the DSEIR include a specific mitigation measure for this species that requires protocol-level surveys be conducted on portions of any potentially suitable habitat areas that could support the FKR. If this species is detected during surveys, consultation with CDFW is warranted. Any occupied habitat should be completely avoided, and the occupied habitat should be permanently protected with conservation easements. This would be consistent with FKR Recovery Action 6 of the Recovery Plan for Upland Species of the San Joaquin Valley (USFWS 1998) and should be fully discussed in the DSEIR.

COMMENT 37: Section 3.7.8 BIO-MM#41: Monitoring, Avoidance and Relocation of Giant Kangaroo Rat, Nelson's Antelope Ground Squirrel, and Fresno Kangaroo Rat Page 134

When describing trapping, exclusion fencing, vegetation trimming, and relocating CESA-listed species in the mitigation measures, please state that incidental take authorization would be required for this activity for each CESA listed species (e.g., giant kangaroo rat, San Joaquin antelope squirrel). Further note, that prior to trapping the

biologist conducting surveys would need to be approved by CDFW. FKR for the reasons stated above should be excluded from the relocation efforts.

**COMMENT 38: Section 3.7.8 BIO-MM#43: Measure Pile Driving Sound Pressure
Page 135**

This measure mentions that sound pressure will be measured; however, there is no mention of frequency and/or levels that will be avoided. Minimizing not only fish mortality but impacts from pile driving to fish migration during construction should be included in the document.

**COMMENT 39: Section 3.7.8 BIO-MM#44: Compensate for Permanent and
Temporary Impacts on Jurisdictional Aquatic Resources Page 135-136**

CDFW advises that the provided minimum compensatory mitigation may not be sufficient in meeting the standards of the “no net loss policy”. The quality of and performance of wetland acreage and value must be considered. This measure should include means to determine the quality and values of the replaced affected aquatic resource.

**COMMENT 40: Section 3.7.8 BIO-MM#48: Compensate for Impacts on CTS
Page 137**

The DSEIR states that if compensatory mitigation is required and mitigation could include purchase of credits from an agency-approved mitigation bank. It should be noted that if there are no available CTS credits at a CDFW approved mitigation bank with a service area that overlaps with the Project area. To comply with the fully mitigate standard of CESA, alternative mitigation would be evaluated during the ITP process and would be required by an ITP issued for the Project. Alternative mitigation could include the purchase of land containing known CTS breeding and upland habitat, placing the land under conservation easement, and assuring adequate funding for the perpetual management of the Habitat Management (HM) Land for the conservation of CTS.

**COMMENT 41: Section 3.7.8 Table 3.7-18 Comparison of the Central Valley Wye
Alternative Impacts Page 147**

Table 3.7.18 Impact BIO#43 “Direct Impacts” are noted as being few to no impacts, however, EFH direct impacts would be significant if migration upstream or downstream is prevented.

COMMENT 42: Section 3.7.8 BIO-MM#49 BNLL Compensation Pages 137 and 138

BIO-MM#49, indicates that the Authority, prior to construction, would determine compensatory mitigation for impacts to blunt-nosed leopard lizard (*Gambelia sila*, BNLL). The BNLL is State Endangered but also a fully protected species, and incidental take of the species cannot be authorized by CDFW for any reason and will

require full avoidance of the species. This compensatory mitigation measure suggests impacts can be compensated, which is not an option. Detection of BNLL during protocol-level surveys warrants consultation with CDFW to discuss implementation of measures to ensure full avoidance.

It is important to note that protocol-level surveys must be conducted on multiple dates during late spring, summer, and fall and that within these time periods there are specific protocol-level date, temperature, and time parameters which must be adhered to. As a result, protocol-level surveys for blunt-nosed leopard lizard are not synonymous with 30-day "pre-construction surveys" often recommended for other wildlife species. CDFW recommends fully addressing avoidance, minimization, and mitigation measures for BNLL in the document and that these measures be included as enforceable mitigation in the finalized document.

COMMENT 43: Section 3.7.8 Table 3.7-19 Significance Conclusions for Biological Resources and Wetlands the Central Valley Wye Alternative Impacts Page 157

This table indicates both direct and indirect impacts "Less than Significant". The direct and indirect impacts are considered "significant" for Essential Fish Habitat impacts and indirect impacts should be the same based on earlier analysis in the document.

COMMENT 44: Appendix 2-A: High-Speed Rail System Infrastructure Pages 12-14

The DSEIR indicates that the typical designs for wildlife crossing structures end-to-end would be 73 feet, would span a width of approximately 10 feet and must have a minimum 3 feet of vertical clearance, extend no more than 1.5 feet below grade (half the vertical clearance), and meet or exceed the minimum 0.41 openness factor. This design has not been studied in the context of the HSR Project in segments currently under construction nor has a study plan been approved to date to study the effectiveness for wildlife movement specifically for San Joaquin kit fox. BIO-MM#36 indicates that design characters for the Central Valley Wye alternatives include effective measures to reduce impacts on mammals. It should be noted that this wildlife crossing design has not been tested to prove effectiveness.

COMMENT 45: Appendix 2-B: California High-Speed Rail: Impact Avoidance and Minimization Features (IAMF) BIO-IAMF#1, 3, 5, 6, 10, 11, 13, 15, 16, 18, 20, 25, 26 and GEO-AMF#1, HYD-IAMF#1 and #3 Pages 5-14 and 26-28

According to the DSEIR, "IAMFs incorporated into the Central Valley Wye alternatives design and construction would avoid or minimize the environmental or community impacts." However, these avoidance and minimization measure lack specifics, therefore they lack enforceability on the contractor during construction. With recent implementation of the IAMF on current HSR segments they do not effectively minimize impacts during implementation and leads to non-compliance issues with permits and agreements. These IAMFs should be enforceable and specific to be effective.

COMMENT 46: Appendix 2-B: California High-Speed Rail: Impact Avoidance and Minimization Features (IAMF) BIO-IAMF#26-Avoidance of Entrapment Page 10

CDFW recommends adding language to include avoiding entrapment to the design of permanent structures beyond just avoiding entrapment during construction activities.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to CNDDDB. The CNDDDB field survey form can be found at: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & Game Code, § 711.4; Pub. Resources Code, § 21089).

CDFW appreciates the opportunity to comment on the Project to assist the Authority in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). If you have any questions, please contact Primavera Parker, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-8139, or by e-mail at Primavera.Parker@wildlife.ca.gov.

Sincerely,



Julie A. Vance
Regional Manager

cc: See Page Twenty-nine

Mark McLoughlin
California High-Speed Rail Authority
June 19, 2019
Page 29

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