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April 28, 2020

Mark McLoughlin
Director of Environmental Services
California High-Speed Rail Authority
770 L Street, Suite 620 MS1
Sacramento, California 95814

Subject: California High-Speed Rail Project, Bakersfield to Palmdale Section (Project) Draft Environmental Impact Report/Environmental Impact Study (DEIR/EIS)
SCH No. 2009082062

Dear Mr. McLoughlin:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a DEIR/EIS 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.
- Draft Supplemental EIR/EIS for the Merced to Fresno Section on June 19, 2019.
- Preferred Alternative for San Jose to Merced on August 22, 2019.
- ADEIR/EIS Cooperating Agency review of the Bakersfield to Palmdale Section on November 18, 2019.

[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 & G. 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 & G. 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 & G. 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: Bakersfield to Palmdale (B-P) Project Section, which extends approximately 80 miles between High-Speed Rail (HSR) stations in Bakersfield and Palmdale, from the southern San Joaquin Valley and northern Antelope Valley. The project section extends from Kern County in the north to Los Angeles County in the south, with the Bakersfield and Palmdale HSR stations making up this section's beginning and ending points, or the project termini.

The DEIR/EIS for this project section considers four HSR alignment alternatives (Alternatives 1, 2, 3, and 5^2 also known as the "HSR Build Alternatives"), as well as one design option, three station locations, two maintenance facility locations, and the various electrical connections and utility infrastructure needed to support the HSR project. The HSR Build Alternatives under consideration begin at the Bakersfield Station in the City of Bakersfield and end at the Palmdale Station in the City of Palmdale. The Draft EIR/EIS considers one design option (the César E. Chávez National Monument Design Option [CCNM Design Option]), near the Nuestra Señora Reina de La Paz/César E. Chávez National Monument (La Paz) in the community of Keene in Kern County. The HSR Build Alternatives under consideration begin at the Bakersfield Station in the City of Bakersfield and end at the Palmdale Station in the City of Palmdale. The project footprint includes all project components and right-of-way needed to build, operate, and maintain all permanent HSR features. The project footprint primarily consists of the rail right-of-way, which would include a northbound and a southbound track in a corridor ranging from 60 feet wide where the track would be elevated on a viaduct to several hundred feet wide where the track would be on an embankment or in a cut. Additional right-of-way would be required to accommodate associated facilities and improvements, such as maintenance facilities and equipment storage areas, permanent access roads, traction power substations, switching and paralleling stations, train signaling and communication facilities, grade separations (overheads and underpasses), intrusion protection barriers, and wildlife crossing structures. The project footprint also includes areas for utility relocations, roadway relocations, electrical power connections, and construction activities (e.g., laydown, storage, and similar areas).

Location: The proposed Bakersfield to Palmdale Section is located in Kern and Los Angeles counties. The Project northern termini located in the City of Bakersfield at the intersection of 34th and L streets (latitude 35°23'25.90"N/longitude -119°0'58.97"W). The southern Project terminus is in the City of Palmdale, terminating at Spruce Court, just past the Palmdale Station (latitude 34°33'47.8"N/longitude -118°6'55.4"W).

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 DEIR/EIS indicates that the Project's impacts would be less than significant with the implementation of mitigation measures described in the DEIR/EIS. 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. CDFW is concerned regarding adequacy of mitigation measures for special-status species including, but not limited to: the State Endangered and federally threatened desert tortoise (*Gopherus agassizii*); the State Threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the State Threatened Swainson's hawk (*Buteo Swainsonii*), Mohave ground squirrel (*Xerospermophilus mohavesis*), and tricolored blackbird (*Agelaius tricolor);* the State Endangered/State Fully Protected and federally threatened California condor (*Gymnogyps californianus*); the State Threatened/Fully Protected greater sandhill crane (*Grus canadensis tabida*); the State Endangered/Fully Protected and federally endangered blunt-nosed leopard lizard (*Gambelia sila*); the State Fully Protected American Peregrine falcon (*Falco peregrinus anatum*), ringtail (*Bassariscus astutus*), white-tailed kite (*Elanus leucurus*), and golden eagle (*Aquila chrysaetos*); the State Species of Concern and federally threatened California red-legged frog (*Rana draytonii*); the State Species of Concern western spadefoot toad (*Spea hammondii*); and the State Candidate Species for listing mountain lion (*Puma concolor*) (Southern California/Central Coast Evolutionarily Significant Units) and Crotch bumble bee (*Bombus crotchii*); and desert kit fox (*Vulpes macrotis ssp. macrotis*) which is protected under California Code of Regulations (CCR), title 14, chapter 5, section 460.

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: 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

The State Fully Protected (SFP) white-tailed kite, golden eagle, American peregrine falcon, greater sandhill crane, and California condor and are known to occur within and in the vicinity of the Project footprint (CDFW 2020). The DEIR/EIS acknowledges the presence of suitable habitat for these species within the Project area but does not present measures to minimize the Project's impacts on SFP birds and raptors. Without appropriate mitigation measures, Project activities conducted within occupied territories have the potential to significantly impact these species.

The Project will remove known and potential nesting trees, foraging habitat, and wetlands used extensively by these species. 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 SFP raptors. In addition, electrical components of the train system (e.g., the overhead quaternary system, upgraded power distribution poles, etc.) have the potential to result in electrocution and strike hazards. In addition, condor hazing as an avoidance/minimization measure to prevent habituation and scavenging has been suggested for use as a mitigation measure in the DEIR/EIS which could potentially constitute take as defined under Fish and Game Code section 86.

Because the DEIR/EIS identifies the potential for SFP birds and raptors to occur in the Project area, CDFW recommends updating the DEIR/EIS 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.

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 SFP birds and raptors.

If suitable habitat is present, CDFW recommends that focused surveys be conducted by qualified biologists at individual Project work areas 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 and habitat use be conducted by a qualified biologist no more than 10 days prior to the start of construction.

In the event that special-status bird and/or 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. Completely addressing mitigation measures for SFP bird and raptor species in the DEIR/EIS for the Project is recommended.

To reduce the impact to special-status birds and raptors from electrical power lines and poles and the quaternary system, spacing between conductors is advised to be far enough apart so they cannot be bridged by a bird's wingspan, designing poles to exclude closely spaced energized parts can be hazardous or fatal to birds, and including perch guards to deter birds from landing or resting on poles.

To prevent nest abandonment and behavioral disturbance, CDFW recommends that consultation will occur prior to construction-related uses of helicopters. CDFW also recommends implementation of avoidance of nighttime construction activities and that all permanent lighting necessary for the long-term operation of the train be designed and installed such that it does not spill out from the rail footprint and cause light pollution.

Lastly, it is advised that a measure be incorporated into the DEIR/EIS that dead and injured wildlife found in the right-of-way will be removed during construction and during ongoing operations when it is safe to do so to prevent the threat of bird strikes should eagles and condors try to forage in the right-of-way during operational periods.

COMMENT 2: 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.

SWHA have the potential to nest within and in the vicinity of the Project. SWHA are also regularly observed foraging throughout the Palmdale and Lancaster area.

In addition, as described in the DEIR/EIS, 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 California Natural Diversity Database (CNDDB) shows SWHA occurrences in Kern and Los Angeles counties (CDFW 2020). CDFW acknowledges that BIO-MM#26 requires a pre-activity survey for suitable SWHA nesting habitat. This measures also requires a no-disturbance buffer in consultation with CDFW should an active nest be found. However, the DEIR/EIS 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. These measures do not indicate what the no-work buffer for active nests will be but rather defers this mitigation measure to the Project Biologist to establish the no-work buffer following consultation. 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, CDFW recommends acquisition of an Incidental Take Permit (ITP).

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.

SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley and the Mojave Desert 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 footprint and 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. CDFW considers a SWHA nest site to be active if it was used at least once within the past five years and impacts to suitable habitat or individual birds within a 5-mile radius of an active nest as significant. Based on the foregoing, Project impacts would potentially substantially reduce the number and/or restrict the range of SWHA or contribute to the abandonment of an active nest and/or the loss of significant foraging habitat for a given nest territory and thus result in “take” as defined under CESA.

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

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. 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 for Project activities occurring in the City of Bakersfield and its outlining areas. CDFW released guidance for this species entitled *Swainson’s Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties*, *California* (2010). CDFW recommends conducting focused surveys for SWHA following these two survey methodologies guidelines.

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.

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. 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.

As stated above, 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. Non-native trees are used by SWHA for nesting therefore the value for compensation of a non-native nesting tree is the same as a native nesting tree species. 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.

If SWHA nests occur in or adjacent to 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.

COMMENT 3: 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 and Section 3.7.7.2 BIO-MM#69: Conduct Surveys and Implement Avoidance Measures for Active Tricolored Blackbird Nest Colonies Page 137

The DEIR/EIS acknowledges that TRBL have the potential to occur within or near the Project (CDFW 2020). The Project footprint in southern Kern County contains annual grasslands, dairies, pastures, wetlands, and field crops.

MM#69 proposes that to the extent practicable, a 300-foot no disturbance buffer will be implemented around nesting TRBL colonies. However, MM#69 goes on to state that the 300-foot buffer could be reduced if needed to meet construction goals. Reduction may be reduced in areas of dense forest, buildings, or other habitat features between the construction activities and the active nest colony or where there is sufficient topographic relief to protect the colony. The measure also proposes that if a colony is established after the initiation of construction the Authority will establish buffers or sound curtains as determined by the Project Biologist. CDFW advises that such an activity has a high likelihood to result in take.

TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014). 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). 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).

Because the DEIR/EIS identifies the potential for TRBL to occur within Project, CDFW recommends conducting the following evaluation of the Project, updating the DEIR/EIS to include the following measures, and that these measures be made Conditions of Approval for the Project.

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. It is advised 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 biologist conduct surveys for nesting TRBL no more than 10 days prior to the start of ground- or vegetation disturbance to evaluate presence/absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

If an active TRBL nesting colony is found during pre-construction 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. Further, TRBL colonies can expand over time and for this reason, the colony may need to be reassessed on a reoccurring basis to determine the extent of the breeding colony within 10 days of Project initiation.

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 ITP, pursuant to Fish and Game Code section 2081(b), prior to any ground-disturbing activities.

COMMENT 4: Section 3.7.6.4 Impact BIO#2: Construction Impacts on Special-Status Wildlife Species-Reptiles Page 59 and Section 3.7.7.2 –BIO-MM#13 Implement Avoidance Measures for Blunt-Nosed Leopard Lizard Page 110

The DEIR/EIS states, “Mortality, injury, or harassment may also occur if these species become trapped in open, excavated areas. The Authority understands that the blunt-nosed leopard lizard is fully protected and the project would be designed to avoid take if potential direct impacts on this species are identified.” CDFW recommends that the DEIR/EIS clearly articulate the avoidance and measures to be implemented so that no take of this SFP species would occur from construction and operation.

This DEIR/EIS also states, “If ground disturbing activities are scheduled during the non-active season, suitable burrows identified during the surveys will be avoided through establishment of 50-foot no work buffers. The Project Biologist may reduce the size of the no-work buffers if information indicates that the extent of the underground portion of burrows is less than 50 feet.” Reduction of the 50-foot no-work buffer increases the risk of take of a SFP species.

CDFW recommends that the Lead Agency not overlook that CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species, including but not limited to BNLL, is prohibited and CDFW cannot authorize their take for any reason. Therefore, it would be prudent to develop a well thought out approach to maintaining avoidance of this species.

Prior to initiating vegetation- or ground-disturbing activities in areas with potentially suitable BNLL habitat, CDFW recommends conducting surveys in accordance with the “Approved Survey Methodology for the Blunt-nosed Leopard Lizard” (CDFW 2019b). This recommended survey protocol, designed to optimize BNLL detectability, reasonably assures CDFW that ground-disturbance will not result in take of this fully protected species if such surveys do not detect any individuals within or adjacent to the Project footprint.

CDFW advises completion of BNLL surveys no more than one year prior to initiation of ground disturbance. Please 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 BNLL are not synonymous with 30-day "pre-construction surveys" often recommended for other wildlife species. Also, the use of conservation dogs for BNLL scat detection would not be appropriate for project-level surveys if used as a stand-alone survey effort to determine negative findings for the species.

BNLL detection during protocol level surveys or other means warrants consultation with CDFW to discuss how to implement Project activities and avoid take.

COMMENT 5: Desert Tortoise (DETO) Section 3.7.6.5 Impact BIO#8- Operational Impacts on Special-Status Wildlife Species- Amphibians, Reptiles, and Insects Page 81 Section 3.7.7.2 BIO-MM#79 Mitigation for Desert Tortoise Pages 140-142

DETO are most common in desert scrub, desert wash, and Joshua tree habitats (CDFW 2018a). Because of the Project location, habitat, and limited area of coverage in the proposed Project footprint that protocol-level surveys were conducted, DETO may have the potential to be impacted by Project activities throughout the Project footprint.

Human impacts to DETO include habitat conversion to agriculture and urban lands, degradation of habitat by off-highway vehicles (OHV), intentional killing of tortoises, and killing by cars and OHV (Doak et al. 1994). The loss of habitat may lead to an increase in the predator raven population, drawdown of water table, introduction of pesticides and other toxic chemicals, and the potential introduction of invasive plants (Boarman 2002). Project activities may result in the loss of potential desert tortoise habitat through conversion, may increase habitat fragmentation, provide raven perches atop access-controlled fence allowing for easier predation of fence stranded DETO, and expand urbanization into the area.

To evaluate potential Project-related impacts to DETO, CDFW recommends that a qualified biologist conduct surveys during the appropriate survey period following the protocol contained in "Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*)" (USFWS 2010) to determine the potential for DETO to use the Project site and surrounding area. Survey results are advised to be submitted to both CDFW and the USFWS. Please note DETO surveys are valid for one year and should be conducted within a year of the start of ground-disturbing activities.

If DETO are found within the Project during pre-construction surveys or construction activities, consultation with CDFW is advised to discuss how to implement the Project and avoid take; or if avoidance is not feasible, to acquire an ITP prior to any

ground-disturbing activities, pursuant Fish and Game Code section 2081(b). Alternatively, the applicant can assume presence and acquire an ITP prior to initiating Project implementation as proposed in Mitigation Measure 16.

COMMENT 6: Section 3.7.6.4 Construction Impacts-Biological Resources (San Joaquin kit fox) Impacts Common to All Bakersfield to Palmdale Project Section Build Alternatives Pages 48 and Section 3.7.7.2 -BIO-MM#45: Compensatory Mitigation for Impacts on San Joaquin Kit Fox Habitat Page 122

This section states, “Urban and agricultural lands affected by construction-period activities are not expected to: (1) provide conditions that support special-status plant species or special-status plant communities; (2) provide preferred habitat for special-status wildlife species; (3) support high-quality aquatic resources; or (4) facilitate the movement or migration of wildlife species.” It should be noted that urban areas such as the City of Bakersfield are occupied by localized high densities of San Joaquin kit fox. As a result, construction-period activities in these areas would have impacts to this species. Other species such as burrowing owl are also present in some urban environments.

The DEIR/EIS proposes habitat will be replaced at a minimum of 1:1 for natural lands and at a ratio of 0.1:1 for suitable urban or agricultural lands, unless a high ratio is required by regulatory authorizations issued under the FESA and/or CESA. As stated above, the San Joaquin kit fox (SJKF) population in Bakersfield uses urban habitat and is a unique and important source population that provides gene flow and diversity to the SJKF population in the surrounding areas. Therefore, CDFW recommends mitigation for the loss of all SJKF habitat, including that in the urban environment.

COMMENT 7: Mohave Ground Squirrel (MGS)

Section 3.7.6.4 Impact BIO#8: Construction Impacts on Special-Status Wildlife Species Page 81

There are MGS occurrences within and adjacent to the Project footprint (CDFW 2020). The CNDDB is limited to locations where surveyors have had access and occurrences have been reported and does not include the entirety of where a species may occur. MGS are known to spend seven months of the year (August through February) in underground burrows in estivation (Gustafson 1993).

Potential habitat for MGS is land supporting desert shrub vegetation within or adjacent to the geographic range of the species (CDFG 2003). The level of survey effort detailed in the Biological Resource Technical Report is indicative of a reconnaissance-level survey and was limited in scope to narrow areas of the Project footprint where access was granted. Based on the information presented, CDFW recommends the probability of occurrence should be identified as at least "moderate". In addition, based on review of version 2 of the species model, additional area should be included as "suitable" within the urbanized area near Lancaster and Palmdale to capture movement and dispersal

behavior (including undeveloped land located immediately adjacent modeled suitable habitat). Recent CNDDB occurrences do not appear to have a suitable category assigned even though the area is undeveloped and, in some cases, connected to areas with suitability categories. CDFW recommends broadening areas for inclusion as suitable habitat.

Major threats to the MGS are drought, habitat destruction, habitat fragmentation, and habitat degradation (Gustafson 1993). MGS is restricted to a small geographic range (Gustafson 1993). Natural cycling is anticipated in MGS populations, therefore, the true indicators of the status of the species are the quantity, pattern of distribution, and quality of habitat (Gustafson 1993). Project activities will result in the loss of potential MGS habitat through implementation of the Project, will increase habitat fragmentation, and may expand urbanization into the area.

To evaluate potential Project-related impacts to MGS, CDFW recommends conducting the following evaluation of the Project and including the following measures in the DEIR/EIS.

CDFW advises that a qualified permitted biologist conduct protocol surveys for MGS following the methods described in the "Mohave Ground Squirrel Survey Guidelines" (CDFG 2003) during the appropriate survey season prior to Project implementation, including any vegetation- or ground-disturbing activities. Please note that guidelines indicate that a visual survey and up to three trapping sessions may need to be conducted (CDFG 2003). Results of the MGS surveys are advised to be submitted to CDFW. Please note MGS surveys are valid for one year and should be conducted within a year of the start of ground- or vegetation-disturbing activities.

If protocol surveys will not be conducted or if surveys detect MGS, in order to implement full avoidance for MGS, CDFW recommends a 50-foot no-disturbance buffer be employed around all burrows that could be used by MGS.

If MGS are found within the Project site during protocol surveys, pre-construction surveys, or construction activities, consultation with CDFW is recommended to discuss how to implement the Project and avoid take; or if avoidance is not feasible, to acquire an ITP prior to any ground-disturbing activities, pursuant to Fish and Game Code section 2081(b). Alternatively, the applicant can assume presence and acquire an ITP prior to initiating Project implementation as proposed.

COMMENT 8: California Red-Legged Frog (CRLF)

Section 3.7.6.4 Impact BIO#2: Construction Impacts on Special-Status Wildlife Species-Amphibians Page 59 and Section 3.7.6.5 Impact BIO#8- Operational Impacts on Special-Status Wildlife Species- Amphibians, Reptiles, and Insects Page 81 and Section 3.7.7.2 BIO-MM# 7: Conduct Pre-construction Surveys for Special-status Reptile and Amphibian Species and BIO-MM#8: Implement

Avoidance and Minimization Measures for Reptile and Amphibian Species
Pages 109-110

CRLF are known to occur within and in the vicinity of the Project area (CDFW 2020). CRLF require a variety of habitats including aquatic breeding habitats and upland dispersal habitats. Breeding sites of the CRLF are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. Additionally, CRLF frequently breed in artificial impoundments such as stock ponds (USFWS 2002). Breeding sites are generally found in deep, still or slow-moving water (greater than 2.5 feet) and can have a wide range of edge and emergent cover amounts. CRLF can breed at sites with dense shrubby riparian or emergent vegetation, such as cattails or overhanging willows, or can proliferate in ponds devoid of emergent vegetation and any apparent vegetative cover (i.e., stock ponds). CRLF habitat includes nearly any area within one to two miles of a breeding site that stays moist and cool through the summer; this includes non-breeding aquatic habitat in pools of slow-moving streams, perennial or ephemeral ponds, and upland sheltering habitat such as rocks, small mammal burrows, logs, densely vegetated areas, and even man-made structures (i.e., culverts, livestock troughs, spring-boxes, and abandoned sheds) (USFWS 2017c). Review of aerial imagery indicates that within and in the vicinity of the Project could serve as habitat to CRLF. The DEIR/EIS does not acknowledge the potential for CRLF to occur in the Project area and the potential for impacts.

CRLF populations throughout the State have experienced ongoing and drastic declines and many have been extirpated (Thomson et al. 2016). Habitat loss from growth of cities and suburbs, mining, overgrazing by cattle, invasion of nonnative plants, impoundments, water diversions, stream maintenance for flood control, degraded water quality, and introduced predators, such as bullfrogs are the primary threats to CRLF (Thomson et al. 2016, USFWS 2017c). Therefore, project activities have the potential to significantly impact CRLF.

CDFW recommends that a qualified biologist conduct a habitat assessment in advance of project implementation, to determine if Project or immediate vicinities contain suitable habitat for CRLF. If suitable habitat is present, CDFW recommends that a qualified biologist conduct surveys for CRLF within 48 hours prior to commencing work (i.e., two night surveys immediately prior to construction or as otherwise required by the USFWS) in accordance with the “Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog” (USFWS, 2005) to determine if CRLF are within or adjacent to the Project.

If any CRLF are found during pre-construction surveys or at any time during construction, CDFW recommends that construction cease and that CDFW be contacted to discuss a relocation plan for CRLF by a qualified biologist.

CDFW recommends that initial ground-disturbing activities be timed to avoid the period when CRLF are most likely to be moving through upland areas (November 1 and March 31). When ground-disturbing activities must take place between November 1 and March 31, CDFW recommends that a qualified biologist conduct construction activity monitoring daily for CRLF.

Comment 9: Western Pond Turtle

Western pond turtle (*Emys marmorata pallida*) has the potential to occur adjacent to within and adjacent to several areas of the Project site. CDFW recommends a Mitigation Measure be incorporated into the DEIR/EIS to require protection for western pond turtle during their breeding season and require a no-disturbance buffer of 475 feet from the outside edge of wetland habitat suitable for the species within the Project site to protect nesting areas. CDFW is recommending a 475-foot buffer since female pond turtles can move overland for up to 325 feet to find suitable sites for egg-laying. In addition to avoiding a minimum of 325 feet from the edge of a water feature, CDFW recommends an additional 150 foot beyond the 325-foot overland travel range to protect nests and nesting sites from direct and indirect Project disturbance. CDFW also recommends focused surveys for western pond turtles be conducted in all areas of the Project site that provide potential habitat for western pond turtle and survey results be incorporate into a revised DEIR/EIR to allow CDFW to make specific recommendations and comments on additional mitigation measures proposed to minimize impacts to this species.

Comment 10: Western Spadefoot toad

Western spadefoot toad aestivate underground in upland habitat and emerge during heavy rainfall events in order to migrate to nearby water bodies (including those that are ephemeral in nature) to breed. Western spadefoot toad may occur within and adjacent to the Project footprint. If potential breeding sites for western spadefoot toad are identified in the Project site during pre-construction surveys, CDFW recommends the consultation with CDFW prior to the implementation of the Project to develop a plan to avoid impacts to western spadefoot toad.

COMMENT 11: Crotch Bumble Bee (CBB)

Section 3.7.7.2 BIO-MM#80 Conduct Surveys and Implement Avoidance Measures for Crotch Bumble Bee and BIO-MM#81 Provide Compensatory Mitigation for Impacts on Crotch Bumble Bee Pages 142-143

On June 28, 2019, the Fish and Game Commission published findings of its decision to advance CBB to candidacy as endangered. Pursuant to Fish and Game Code section 2074.6, CDFW has initiated a status review report to inform the Commission's decision on whether listing of CBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, section 15380, the status of the CBB as an endangered candidate species under CESA (Fish & G. Code, § 2050 et

seq.) qualifies it as an endangered, rare, or threatened species under CEQA. It is unlawful to import into California, export out of California or take, possess, purchase, or sell within California, CBB and any part or product thereof, or attempt any of those acts, except as authorized pursuant to CESA. Under Fish and Game Code section 86, take means to hunt, pursue, catch, capture, or kill, or to attempt to hunt pursue, catch, capture, or kill. Consequently, take of CBB during the status review period is prohibited unless authorization pursuant to CESA is obtained.

CBB have been documented to occur within the vicinity of the Project area (CDFW 2020). Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows, but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (Williams et al. 2014; Hatfield et al. 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014). Therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local CBB populations.

The Authority proposes using general guidelines and best practices for bumblebee surveys would follow USFWS' "Survey Protocols for the Rusty Patched Bumble Bee (*Bombus affinis*)" (USFWS 2019). MM#80 indicate using non-lethal netting method to capture CBB. Netting is a form of capture which is a form of take under CESA; therefore, an ITP, pursuant to Fish and Game Code section 2081(b), is required for conducting surveys under this method.

CBB was once common throughout most of the central and southern California; however, it now appears to be absent from most of it, especially in the central portion of its historic range within California's Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years.

To evaluate potential impacts to CBB associated with the Project, CDFW recommends implementing the following mitigation measure as a condition of approval for the Project.

CDFW advises that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.

Comment 12: Joshua and Oak Tree Woodland Habitat

Section 3.7.6.4 Impact BIO#3: Construction Impacts on Special-Status Plant Communities Pages 65-66 and BIO-MM#1 page 107 and Section 3.7.7.2 BIO-MM# 6 Pages 108-109

The Project will remove approximately 268.2 to 300.3 acres of Joshua tree (*Yucca brevifolia*) habitat and an unknown number of acres of oak (*Quercus spp.*) woodland habitat resulting in a net loss of two valuable habitat types. Joshua tree woodland is considered a California Native Plant Society 3 listed rare vegetation community that has limited distribution in California. Project implementation would result in a substantial adverse effect, either directly or through habitat modifications, on a rare vegetation community identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS. CDFW advises that throughout the Project footprint, the Joshua tree and oak woodland habitat appears to be of good functional quality displaying a high percentage of recruitment (juvenile trees). This is significant given the recent drought experienced in the region.

The DEIR/EIS lacks analysis and mitigation for the temporal loss off Joshua tree and oak woodland habitat. BIO-MM# 1 does not include a specific and enforceable avoidance buffer for Joshua trees. CDFW notes that the DEIR/EIS does not discuss or propose compensatory mitigation to offset the loss of either habitat type in the implementation of the Project. Therefore, it is unclear how Project impacts would be reduced to less than significant without specific and enforceable avoidance, minimization, or mitigation measures identified in the DEIR/EIS.

CDFW recommends the DEIR/EIS identify, map, and discuss the specific vegetation communities and habitat communities within the Project Area following CDFW's "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (Survey Protocols) see: (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline). Please note, this protocol was updated, and the 2018 version referenced here should be used. In order to determine the rarity ranking of vegetation communities potentially affected by the Project, the Manual of California Vegetation (MCV) alliance/association community names should be provided as CDFW tracks rare natural communities using this classification system.

CDFW considers natural communities such as Joshua tree woodlands with ranks of S1-S3 to be sensitive natural communities that should be addressed in CEQA (CEQA Guidelines, § 15125[c]). An S3 ranking indicates there are 21-80 occurrences of this community in existence in California, S2 has 6-20 occurrences and S1 has less than 6 occurrences. CDFW recommends avoiding any sensitive natural communities found on or adjacent to the Project. If avoidance is not feasible, CDFW recommends mitigating at a ratio of no less than 5:1 for impacts to S3 ranked communities and 7:1 for

S2 communities. This ratio is for the acreage and the individual plants that comprise each unique community.

CDFW recommends the DEIR/EIS be revised to reflect a 4-inch diameter at breast height when considering which oak trees, and trees in general, require mitigation. More importantly, the oak woodland community needs to be considered in its entirety when considering mitigation to replicate the habitat function. Oak trees are a dense, slow growing hardwood requiring decades to mature. CDFW recommends revising the mitigation measures to require monitoring oak trees/oak woodlands for a minimum of 15 years and up to 20 years to determine success. To reestablish the oak woodlands, CDFW recommends three planting seasons. The first planting season, year 0, being the acorn and sun tolerate ground covers; the second planting season occurring at approximately year 5, introducing sun/shade tolerate species; and the third planting season at year 10 with the introduction of more shade tolerate understory species. To determine the appropriate species and density of the oak woodlands, three representative oak woodland sites need to be analyzed for species composition, density, and richness. The created sites, once established, need to reflect the representative sites.

These Joshua tree and oak woodland mitigation areas should be protected against anthropogenic impacts for the life of the project. CDFW recommends mitigation lands be preserved and managed in perpetuity under a conservation easement (CE) and managed by a local land conservancy. The proposed specific mitigation location should be identified in the CEQA document in order to ensure that mitigation is not deferred until some future time; however, the DEIR/EIS document "may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way" (CEQA Guidelines, § 15126.4(a)(1)(B)).

This section should also discuss any oak tree regulations that would apply to the project (see section S.4.2.5 [Plant Communities] discussion) as well.

COMMENT 13: Special-Status plants

Section 3.7.6.4 Fresno to Bakersfield Locally Generated Alternative Area-Oswell Street to the Palmdale Station- Impact BIO# 1 Construction Impacts on Special-Status Plant Species Pages 50 and Section 3.7.7.2 BIO-MM#1 Conduct Presence/Absence Pre-construction Surveys for Special-Status Plant Species and Special-Status Plant Communities and BIO-MM#2 Prepare and Implement Plan for Salvage and Relocation of Special-Status Plant Species Pages 107-108

Several special-status plant species have been documented to occur in the vicinity of the Project area (CDFW 2020). As stated in the DEIR/EIS, the Project area contains habitat suitable to support numerous special-status plant species meeting the definition of rare or endangered under CEQA Section 15380 including Alkali mariposa lily (*Calochortus striatus*), Mojave spineflower (*Chorizanthe spinosa*), Rosamond eriastrum

(*Eriastrum rosamondense*), Sagebrush loeflingia (*Loeflingia squarrosa var. artemisiarum*), Lancaster milk-vetch (*Astragalus preussii var. laxiflorus*), Parry's spineflower (*Chorizanthe parryi*), and California goldlfields (*Lasthenia californica*).

CDFW finds the CNDDB mapping used for special-status plant communities was outdated (ca. 2016) and aerial imagery used as supporting data for the lack of native plant habitat occurrence in the Supplemental Study Area were from years 2009 and 2014, both of which were drought years of historic significance. As such, the aerial imagery of the Project area is not robust in depicting native plant communities within the Project footprint and cannot be used to model or infer presence/absence of the special-status plant communities. CDFW recommends this mapping be updated with current data and provide a range of mapping and imagery that captures both wet and dry year vegetation community occurrences.

The DEIR/EIS also indicates that botanical surveys for the Project alignment in Los Angeles County were last conducted in 2015 within limited areas. CDFW recommends updated surveys be conducted for the Los Angeles County segment during the appropriate conditions to provide a more current assessment and to verify the results of the prior 2015 work (see section 5.4.2.5 Plant Communities). Section 6.2 acknowledges that access for significant portions of the Project footprint were not available; therefore, CDFW recommends mapping areas to show where field work was conducted versus areas which were analyzed through non-field work methods.

Although BIO MM#1 of the DEIR/EIS requires a pre-activity survey and a buffer around special-status plants, it does not specify the protocol to be used or the extent of the no-disturbance buffer to be implemented if a State-listed plant species is detected and cannot be avoided. Mitigation Measure MM#2 also states that the mitigation plan has the potential to include plant relocation or seed collection, both of which would be considered take, pursuant to Fish and Game Code Section 86. Absent acquisition of an ITP in accordance with Fish and Game Code section 2081(b), take of State-listed plants would be a violation of the Native Plant Protection Act. Therefore, the measures in the DEIR/EIS may not be adequate to reduce impacts to a level that is less than significant and may themselves result in take.

CDFW recommends that a qualified botanist conduct a habitat assessment in advance of project implementation to determine if the Project or the immediate vicinity contain suitable habitat for special-status plant species. 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 Sensitive 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.

CDFW recommends 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.

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 issuance of an ITP by CDFW, pursuant to Fish and Game Code Section 2081(b).

Please note, mitigation ratios, and/or other measures for CESA-listed plant species will need to meet the full mitigation requirement pursuant to section 2081(b)(2) of Fish and Game Code, the details of which will be determined though the ITP process.

COMMENT 14: Desert Kit Fox

The proposed Project is within desert kit fox (*Vulpes macrotis arsipus*) range and contains suitable habitat for the species. The desert kit fox is protected under Title 14, California Code of Regulations, section 460, which prohibits take of the species at any time. CDFW recommends that the USFWS "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance" (2011) be followed and that surveys be conducted accordingly and prior to commencing any Project-related activities. If any active or potential dens are found on the Project site during these surveys, consultation with CDFW would be warranted for guidance on take avoidance measures for the desert kit fox.

COMMENT 15: Mountain Lion

It should be noted that on June 25, 2019, a petition to list the mountain lion (*Puma concolor*), Southern California/Central Coast Evolutionarily Significant Unit (ESU) in Southern and Central California as Threatened or Endangered pursuant to CESA (Fish & G. Code §§ 2050 et seq.) was submitted to the California Fish and Game Commission. Specifically, the petitioners requested listing as a "threatened species" for the ESU comprised of the following recognized mountain lion subpopulations: 1) Santa Ana Mountains; 2) Eastern Peninsular Range; 3) San Gabriel/San Bernardino Mountains; 4) Central Coast South (Santa Monica Mountains); 5) Central Coast North (Santa Cruz Mountains); and 6) Central Coast Central. On April 16, 2020 the Fish and Game Commission determined that the petitioned action "may be warranted" and established mountain lion within the proposed ESU as a candidate species under CESA. As a candidate species, mountain lion within the proposed ESU now has all the protections afforded to an endangered species under CESA.

CDFW advises including and referencing recent linkage studies on mountain lion that includes these six subpopulations of mountain lions in California. The Project alignment transects the Southern California ESU and two of the genetically distinct mountain lion subpopulations (San Gabriel/San Bernardino and Eastern Peninsular Range). Therefore, CDFW advises analyzing Project impacts to the subpopulations, including issues with connectivity and fragmentation of habitat. Based on this analysis, CDFW recommends the DEIR/EIS be revised to include robust feasible avoidance, minimization, and mitigation measures to reduce impacts to mountain lion to less than significant.

COMMENT 16: Section 3.7.6.5 Impact BIO#8- Operational Impacts on Special-Status Wildlife Species- CEQA Conclusion Page 82-83

This section states that effective mitigation would include the relocation of special-status wildlife species within the project footprint. This activity is considered take in the form of capture or the attempt to capture the species (as defined under Fish and Game Code Section 86) and warrants the acquisition an ITP from CDFW for any species that is State-listed candidate, threatened, or endangered. Take of any SFP protected species is prohibited, and CDFW cannot authorize their take for any Project-related reason.

COMMENT 17: Section 3.7.6.5 Impact BIO#13- Potential Conflicts with Conservation Plans and Easements Page 89

This section lacks analysis of indirect impacts to conservation plans and conservation easements (CE). The alignment will go through the White Wolf CE and Tejon CE lands purchased for conservation of California condor and other special-status species by the State of California. The impacts to the values set forth in CEs were not evaluated and analyzed. CDFW recommends this be analyzed and included in the DEIR/EIS, including the legal mechanism that the Authority would utilize to condemn or otherwise impact lands permanently conserved by the State of California. As indicated previously during early consultation, CDFW recommends that an alternative location for that portion of the Project alignment be identified to avoid impacts to permanently conserved lands and the associated legal implications.

COMMENT 18: Section 3.7.7 Mitigation Measures Page 90-91

This section states: "The goal of the habitat mitigation is to ensure the future conservation of affected resources on a regional scale such that the benefits to the affected resources offset the impacts of the narrow, linear project, which would affect a relatively small percentage of the important resources in the region. In some cases, and in consultation with the USFWS and CDFW, the compensatory mitigation may be weighted in favor of resources for which conservation is a higher priority than for more common resources or resources that would experience lesser impacts." It should be noted that the Project is not simply a narrow linear project. The project spans between two counties (Kern and Los Angeles) for 80 miles (linearly), which does not account for

total project acres with important biological and aquatic resources. In June 2017, CDFW Region 5 provided the Authority with information on potential conservation areas within Los Angeles County (focused on the B-P section) based on five criteria as follows: 1) Existing land use conservation designations; 2) Nine species likely to occur within the B-P project area based on known occurrences and high suitability; 3) Locations within identified regional wildlife corridors and linkages; 4) Presence of wetlands; and 5) Location adjacent to public-owned lands and public-owned preserve lands. CDFW is able provide information on areas that are potentially suitable for general conservation purposes (considering the species included in the B-P Biological Resources Technical Report [BARTR]); however, whether or not these areas will satisfy project-related mitigation requirements for State permitting will require further review and information. In the case of the B-P segment, mitigation for impacts in CDFW Region 4 (Kern County) or CDFW Region 5 (Los Angeles County) should occur in those respective CDFW Regions.

The DEIR/EIS also describes the proposed mitigation ratios for special-status species and habitats impacted by the Project. CDFW does not agree that all of the proposed mitigation and associated mitigation ratios proposed will be sufficient to reduce impacts to all special-status species and habitats to less than significant levels. Please note that mitigation ratios, and/or other measures for CESA-listed species will need to meet the full mitigation requirement pursuant to Section 2081(b)(2) of Fish and Game Code, the details of which will be determined though the ITP process.

COMMENT 19: Section 3.7.7.2 BIO-MM#22 Conduct Pre-Construction Surveys for Nelson's Antelope Squirrel and Tipton Kangaroo Rat Pages 1114-115

CDFW recommends that protocol-level surveys should be conducted prior to any ground-disturbing activities. It should also be noted that both trapping and relocation (handling) of State-listed species to remove them from harm's way or out of the Project footprint prior to ground-disturbing activities warrants the acquisition of an ITP pursuant to Fish and Game Code section 2081(b).

COMMENT 20: Section 3.7.7.2 BIO-MM#25 Conduct Pre-Construction Surveys for Special-Status Bats

To minimize potential Project-related impacts to bat species, CDFW recommends the Authority conduct pre-construction surveys to establish areas of occupancy the year prior to the start of construction in each construction area and that surveys be conducted by a minimum of two CDFW-qualified biologists and consist of:

- Two spring surveys (April through June) and two winter surveys (November through January). Each survey consists of one dusk emergence survey (start one hour before sunset and last for three hours), followed by one pre-dawn re-entry survey (start one hour before sunrise and last for two hours), and one daytime visual inspection of all potential roosting habitat on the Project site.

Conduct each survey within one 24-hour period. Focus visual inspections on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Use bat detectors, bat call analysis and visual observations during all dusk emergence and pre-dawn re-entry surveys.

- Data collection for each survey (whether bats are, or have been, present on the Project site) would assemblage of species using the site. Frequency of site use (including seasonal changes). Type of roost (i.e., maternity roost, day roost, night roost, feeding perch, mating roost, satellite roost, transitional roost or winter hibernaculum). Location, ambient temperature, internal dimensions and the aspect and orientation of the roost. Spatial and temporal distribution of bat activity. Flight paths, exit and entrance points. Intensity of bat usage (i.e., number of bats, time and duration of use). Identification of any survey constraints.

Comment 21: Section 3.7.7.2 BIO-MM#26 Implement Bat Avoidance and Relocation Measures, Avoidance Bats

If bats are found to occupy the Project site, CDFW recommends the general bat avoidance, minimization and mitigation measures outlined below.

- Avoid direct and indirect impacts to roosting sites by establishing a no-disturbance buffer of 300 feet around roost sites.

- Prohibit clearing and grubbing adjacent to the roost site and lighting use near the roost site where it would shine on the roost or interfere with bats entering or leaving the roost. Prohibit the operation of internal combustion equipment, such as generators, pumps and vehicles within 300 feet of the roost site. Prohibit the use of bird netting.

- If avoidance of roost sites is infeasible, maintain portions of the features that provide naturalized habitat to the greatest extent possible and improve existing roost sites and/or provide new roost sites on buildings or on the Project site. Implement these measures only after consultation with CDFW.

- New roost sites must be in place prior to the initiation of Project-related activities to allow enough time for bats to relocate.

- Design and locate new and enhanced roost sites to be compatible with the bats' search image and habitat requirements (i.e., thermal regulation, interior size, ventilation, etc.). Design new and enhanced roost sites in consultation with CDFW.

- Exclude bats from directly affected work areas selectively and only to the extent necessary to prevent morbidity or mortality to the colony. Use one-way bat exclusion devices, installed in a bat-safe way, to exclude bats and then use expandable foam, steel wool or other method to block the entrance, after the bats have gone. Exclude bats only after consultation with CDFW, at a time that is compatible with the species' normal behavior patterns (i.e., breeding, feeding, hibernating, etc.). In general, exclusions shall not occur during the maternity/pup-rearing season nor during the hibernation season, as determined by conditions at the Project site.

Comment 22: Section 3.7.7.2 BIO-MM#27 Implement Bat Exclusionary and Deterrence Measures Pages 115-116

CDFW recommends that the bat roost relocation plan be submitted for CDFW review prior to construction activities.

Comment 23: Section 3.7.7.2 BIO-MM#28 Conduct Pre-Construction Surveys for Ringtail and Ringtail Den Sites and Implement Avoidance Measures Page 116

This measure indicates that it would guide future protective measures and relocation. Ringtail is a State Fully Protected species, and relocation is not permitted. CDFW recommends that this mitigation measure be revised. CDFW advises that a monitor be present during ground-disturbing activities at occupied dens.

Comment 24: Section 3.8 Hydrology and Water Resources (HWR)

The Methods for NEPA and CEQA Impact Analysis (Section 3.8.4.3) and Methods for Determining Significance under CEQA (Section 3.8.4.4) do not appear to be inclusive of the resources stated in Floodplain Functions and Values (Section 3.8.5.7 page 3.8.37) and potential impacts to the Surface Water Beneficial Uses identified in the Surface Water Quality section (3.8.5.6), and instead focus almost entirely on the Federal Emergency Management Agency (FEMA) definition of Floodplain and Floodway. Potential impacts to important functions, such as habitat and wildlife beneficial uses, and values of groundwater and surface water features should be included in the impact analysis.

Section 3.8.4.1 Page 3.8-10

The Study Area for Analysis definitions of Surface Waters and Groundwater exclude springs and seeps which are important water resources for fish and wildlife resources.

Section 3.8.4.2 Pages 3.8-10 through 3.8-15

The potential for temporary and permanent impacts to surface features fed by subsurface flow such as springs and seeps are not analyzed and addressed. Tunneling

could intercept the subsurface flow that feeds springs and seeps, impacting critical fish and wildlife resources.

Section 3.8.4.4 Pages 3.8-18 and 3.8-19

The Methods for Determining Significance under CEQA section does not address potential changes to groundwater flows that express on the surface as springs and seeps. Impacts to these features could pose a significant impact to local or regional fish and wildlife resources. The Hydrology and Water Resources section focuses solely on larger alluvial groundwater basins and does not evaluate these smaller-volume groundwater resources that some ecosystems may be locally dependent.

Section 3.8.6.3 Pages 3.8-72 through 3.8-74

Impact HWR #8 does not address the potential permanent impacts to springs and seeps from alterations to, and interruptions of groundwater flow patterns. The permanent loss of springs and seeps due to project construction could constitute a significant effect under CEQA and should be included in the DEIR/EIS analysis.

Comment 25: Biological Resources Technical Report Comments and Recommendations

CDFW offers the following comments and recommendations on the BARTR prepared to evaluate the biological resources present in or potentially affected by the Bakersfield to Palmdale Section of HSR cited in the Draft EIR/EIS.

Section 5.2 General Comments:

The updated Redacted Revised Draft Final BARTR - November 2018. Pages 6-3 through 6-21 appear to be missing. The DEIR does not contain the suggested updated hydrology reports to reflect wet conditions resulting from the 2017 rainy season and does not contain updated vegetation surveys to better capture on-site vegetation resulting from the 2017 rainy season. The DEIR fails to utilize a range of estimates for acreage of impacts to allow for variability in conditions and limited accuracy due to incomplete survey data.

Based on a comparison of the BARTR Aquatic Resources Delineation and other data sources, it appears that many features which have been mapped in several state and federal data sets are not included in the BARTR, including riverine, freshwater pond and lake resources. The current delineation mapping likely underestimates the level of direct/indirect impacts to state jurisdictional features. CDFW recommends that the impact analysis should also evaluate the direct and cumulative impact of isolating streams/watercourses by impacting the upper and lower reaches of features which then can affect hydrological functions and values of the entire section or watershed area.

Palmdale Station: The BARTR discusses the Palmdale station in various sections (e.g., Sections 2.2.2 and 7.2). It is recommended that additional information be provided regarding moving this station to the west to avoid/reduce impacts to Una Lake and State-listed species that are known to occupy the area. CDFW recommends that such an alternative be retained in the Project EIR/EIS as a potentially feasible alternative that would attain most of the basic objectives of the project and avoid and/or substantially reduce/lessen significant impacts to biological resources (Pub. Resources Code section 21002 and state CEQA Guidelines section 15126.6 [a]).

Section 6.3.15 Southwestern Willow Flycatcher (*Empidonax traillii extimus*) Page 6-48

This section states that, "willow flycatchers are common in the region during migration (eBird), but virtually all of these are believed to be little willow flycatchers (*E. t. brewsteri*), rather than southwestern willow flycatchers (Unitt 1987,2004; Allen et al. 2016)." The State listing of the full species as endangered includes all subspecies; *Empidonax traillii* (willow flycatcher), *Empidonax traillii brewsteri* (little willow flycatcher), and *Empidonax traillii extimus* (southwestern willow flycatcher). Based on the information provided in the BARTR, CDFW does not concur that the low probability of occurrence concluded for southwestern willow flycatcher also applies to willow flycatcher and little willow flycatcher. Suitable habitat appears to be absent within the Biological Study Area (BSA) so the species is considered to have a low to moderate probability of occurrence. Nevertheless, depending on the chosen alternative, the project may affect up to 25 acres of potentially suitable southwestern willow flycatcher habitat as summarized in Table 7.3.

Section 6.3.16 Least Bell's Vireo (*Vireo bellii pusillus*) Page 6-49

This section acknowledges that, "sources, including the CDFG and Point Reyes Bird Observatory, indicate the species occurs near aquatic features in the Antelope Valley within the BSA (Point Reyes Bird Observatory 2004)" and that "additional observations reported in eBird come from Piute Ponds (approximately 2.5 miles from the BSA) but then later concludes that "it is considered to have a low probability of being present in suitable portions of the BSA." Based on the information presented in the BARTR, CDFW recommends that probability of occurrence should be identified as at least "moderate".

Section 6.3.26 California Legless Lizard (*Anniella pulchra)* Page 6-58

As indicated in the BARTR, CDFW agrees that there is a high probability of encountering this Species of Special Concern (SSC) in the southern portion of the alignment, particularly the Antelope Valley area. Any proposed impact avoidance and minimization features (IAMFs) for this species should avoid impacts to this species to the maximum extent practicable and include pre-construction surveys to identify and relocate any species to nearby suitable (and conserved) habitat. Relocation of this

species would require appropriate permits (e.g., scientific collecting) from the State and is not considered mitigation for impacts to this species.

Section 6.3.29 Western Pond Turtle (*Actinemys marmorata*) Page 6-62

This section appears to exclude any of the Antelope Valley area as within range of this SSC and concludes that the species is considered to have a low probability of occurrence within the BSA. Areas at in the southern portion of the alignment, near the Palmdale lake and Una Lake areas contain potentially suitable aquatic habitat for this species as well as potential suitable upland habitat for this species may occur in the vicinity of appropriate aquatic habitats. CDFW recommends that the potential for this species to occur within the BSA be reassessed while considering rainfall from 2017 to present date.

Section 6.3.30 Mountain Plover (*Charadrius montanus*) Page 6-63

As indicated in the BARTR, CDFW agrees that there is suitable foraging habitat and a high probability of encountering this state SSC in the southern portion of the alignment, particularly the Antelope Valley area. Any proposed IAMFs for this species should avoid impacts to this species to the maximum extent practicable and include pre-construction surveys for nesting.

Section 6.3.31 Burrowing Owl (*Athene cunicularia*) Page 6-64

This section notes that, evidence of burrowing owl (BUOW) activity (pellets, whitewash) was found in areas dominated by alkali desert scrub, desert scrub, Joshua tree woodlands, and annual grassland habitats with appropriate burrows (Figure 6-4). Four BUOW nests were found within the raptor survey area during the 2016 raptor surveys, two near Bakersfield and two in the Antelope Valley. A total of 19 BUOW detections were recorded in those areas. This species was not included in the HSR modeling. The IAMF for this State SSC should include the following: Updated focused surveys for the BUOW to accurately quantify the magnitude of impact and to develop an avoidance/mitigation strategy in accordance with the CDFW Staff Report on Burrowing Owl Mitigation (March 7, 2012) and the California Burrowing Owl Consortium's Burrowing Owl Survey Protocol and Mitigation Guidelines (April 1993). CDFW considers the loss of occupied BUOW habitat significant, at a project level and cumulatively, without adequate mitigation; CDFW recommends that mitigation land which supports an active BUOW population be required for the project to address impacts to on-site occupied BUOW habitat. Mitigation lands for any unavoidable impacts to occupied BUOW habitat should include occupied BUOW burrows and be of sufficient acreage and vegetative compendium to support foraging activities. CDFW acknowledges that in section 8.2.5 the DEIR/EIS indicates that the Authority will follow protocol set forth in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). However, additional description regarding the mitigation lands should be provided.

II. Editorial Comments and/or Suggestions

Nesting birds: CDFW encourages initiation of Project-related ground disturbing activities 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 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 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 on site, 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 episodic, ephemeral, or intermittent as well as those that are perennial. This includes ephemeral streams, desert washes, and watercourses with

subsurface flow. It may also apply to work undertaken within the floodplain of a body of water.

As also indicated in Section 6.6, it appears that desert washes, episodic features and claypan/pooled areas have been underrepresented in the aquatic delineation. CDFW recommends that additional delineation work (aerial interpretation, field surveys, imagery processing) be conducted to update the results incorporated to provide a more accurate representation of baseline aquatic resources to provide a robust impact analysis. CDFW recommends including an updated inventory of aquatic features, analysis of upstream/downstream impacts and isolation, hydrologic connectively between aquatic features and project features to maintain hydrology with and adjacent to the Project footprint.

CDFW finds that the definition provided in the DEIR/EIS does not encompass all streams that may be impacted within the Project footprint; therefore, CDFW advises the definition of stream in the DEIR/EIS be modified to incorporate sufficient parameters that these waterways will be captured by the definition and concurrently included in the analysis of impacts to features subject to 1602 jurisdiction. As currently analyzed in the DEIR/EIS, CDFW has concerns that stream acreage and biological resources are vastly under-estimated. 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. CDFW advises to be conservative with the estimate of impacts subject to 1602 jurisdiction. If this amount turns out to be greatly underestimated and thus the analysis of impacts potentially inaccurate it could pose significant issues and possible delays for permit issuance.

Finally, to minimize impacts to areas subject to 1602 jurisdiction and to maintain hydrological function upstream/downstream of the proposed alignment, CDFW recommends that features which allow movement of water from rainfall events and other hydrologic sources be incorporated into the Project. These features can be a combination of culverts and bridges based on the extent of the hydrological features, and in some cases extension of viaducts currently proposed. In addition, the features to allow hydrologic passage should also be designed to allow wildlife passage where possible.

Wildlife Corridor Movement: The DEIR/EIS asserts, "Wildlife would be able to cross the alignment between at-grade segments where the HSR would be elevated on a viaduct or an underground tunnel." This statement assumes that the viaduct locations will remain in place; however, as with other HSR segments currently under construction, these viaduct locations could later be redesigned to be fenced at-grade and impermeable to wildlife. CDFW advises that a stronger design criterion should be developed and included into the DEIR/EIS to ensure that areas of planned viaduct cannot be changed to less permeable features by the Design-Build contractor.

As CDFW has discussed during early consultation and in previous comment letters to the Authority, the single biggest potential biological impact arising from construction of the 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. Resulting 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 Bakersfield to Palmdale 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. Later changes of this nature could limit the ability of species such as San Joaquin kit fox and mountain lion to move unimpeded throughout its historic range.

Potential future design changes that could result in reduced wildlife permeability and increased wildlife impacts need to either be considered in the DEIR/EIS, or somehow precluded from occurring at the construction phase. 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 or have untested efficacy for most taxa. Because wildlife would be more likely to move underneath an elevated rail, or over a below ground rail, as opposed to using a tunnel or vegetated overpass, CDFW advises the inclusion of the at-grade embankment in the DEIR/EIS 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.

If wildlife passage structures will be used instead of elevated or below ground 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 and canal 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, be evaluated on a species-specific basis, and required to meet specific minimum dimensions for increased probability of wildlife utilizing these structures for crossing opportunities.

Specific care should be afforded to ensure that any wildlife crossing structure design incorporates generous openness and clear line of sight from entry to exit to maximize detection of the crossing by species at the time of encounter and to ensure use. Currently, the DEIR/EIS does not provide specific dimensions listed for the openness, what constitutes a “slight grade of approaches to prevent flooding”, and the number of crossings that would ensure permeability for such a long linear feature. Without these specifics and other relevant assumptions, it is not possible to determine if the effectiveness of this mitigation measure will reduce the level of significance. CDFW recommends that wildlife crossing locations, configurations, and demonstrated efficacy for target species use (e.g., mountain lion, desert kit fox, Mohave ground squirrel, etc.) be a requirement of the final design.

Finally, the DEIR/EIS does not analyze the impact of design elements, such as the Intrusion Protection Barriers (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. The DEIR/EIS includes information that the at-grade segments of the project would be entirely fenced or walled and thereby eliminate adverse interactions with wildlife, including direct strikes. While this may be true in some instances at the individual or localized level, the total length and linear nature of the project's fencing/walls, along with other projects in the area, may cause site-specific and cumulative impacts involving species fragmentation and impediments to wildlife movement. CDFW agrees that inclusion of proper placement and design of the dedicated wildlife crossings will be a very important component of the environmental planning process for the project. We look forward to reviewing the full analysis on wildlife movement including the further regional study of habitat connectivity being overseen by South Coast Wildlands. Furthermore, the DEIR/EIS notes that an inventory of drainage or crossing features (between Bakersfield and State Route 138) was developed with field surveys from the year 2012 and later updated in October 2014 and August 2015. CDFW requests a copy of this dataset and will review the full analysis on wildlife movement. CDFW also agrees that wildlife movement areas (open connectivity) are also important for plant species.

Cumulative Impacts: Multiple related projects have been proposed within the Kern and LA counties as well as the City of Bakersfield, City of Lancaster, and City of Palmdale with similar impacts to biological resources. General impacts from these projects include habitat fragmentation, degradation, habitat loss, and potential loss of individuals to the population. The DEIR/EIS uses reference sources for future project dated from 1993-2016, which are outdated and have been completed based on project timing. CDFW recommends the Authority consider referencing updated sources of all approved and future projects when determining impact significance to biological resources. One such future transportation project that was not analyzed is the DEIR/EIS is the Virgin Train (XpressWest) high-speed train project that goes from the City of Victorville to the City of Las Vegas, Nevada, with a connection at the Palmdale Station.

Use of Modeling for Impact Analysis

CDFW has previously expressed its reservations, in writing, with using current predictive models for the impact analysis necessary for CDFW to issue an ITP without having site-specific surveys to supplement the modeling effort. We are concerned that the lack of current, site-specific information to accurately quantify the magnitude of impact to CESA-listed species may cause delays in issuance of an ITP. CDFW is also concerned how the modeled output is proposed to be used for areas where there are no occurrence data. As a reminder, CNDDB captures voluntarily reported detections only; areas without records should not be treated as areas where species do not occur (unless they have been surveyed recently with negative findings). Our primary concerns with using modeling without site-specific protocol surveys to assess and quantify impacts for purposes of CESA include the following:

- Modeling alone may not capture the full extent of species occurrences and habitat suitability due to data sources, timing of surveys, limited access to significant portions of the alignments, and the inherent accuracy issues associated with using regionally-based data to determine site-specific impacts without a reliable verification method (e.g., protocol surveys). Using predictive modeling only to evaluate species presence/absence and to quantify project-specific impacts (acreages) could miss marginal or atypical habitat usage, especially by high mobile species, and impose a risk of unauthorized take in areas not covered by the ITP or grossly underestimates the basic level of take coverage in the ITP necessary to complete the project. In addition, some areas not ranked as suitable have not been surveyed recently or have never been surveyed.

- Due to the stochasticity and cryptic nature of some species, it is very difficult to accurately “detect” species and determine mitigation requirements using modeling. Some species are unpredictable due to variables the modeling may not or cannot adequately capture, habitat requirements that are constantly evolving over time or space and/or have distributions that can be analyzed

statistically but not be predicted precisely. For example, opportunistic species can have dynamic ranges and use areas not ranked at all by the model based on its current parameters.

- As an estimation of reality, the current model includes a defined range of species and conditions (using the rules selected) based on a snapshot of time and may not accurately capture use by all species when impacts occur and/or translate down to the site-specific (e.g., footprint) level. Modeling alone can provide a statistically significant underrepresentation of habitats potentially occupied by State-listed species. For example, some listed plants may only occur at specific times of the year under certain conditions and only be adequately evaluated with protocol surveys within the project footprint at the appropriate time. Likewise, some state fully protected bird species not known to nest or breed in the project area (e.g., white-tailed kite, peregrine falcon and bald eagle) could be transient to the area at certain times of the year.

CDFW continues to emphasize that although the current modeling can be a helpful tool for the Authority's own preliminary evaluation, as well as for compensatory mitigation planning, it will not be a substitute for our analysis when it comes to CESA permitting. CDFW will need to conclude whether or not listed species will be impacted by the project. If predictive modeling is used in lieu of biological surveys by the HSRA, CDFW's ITP related analysis we will need to err on the side of assuming presence in the Project footprint. Our impact and take analysis and required minimization and mitigation measures will be reflective of this assumption.

Use of Pre-Construction/Modified Protocol Surveys

CDFW recognizes that the Authority proposes to use additional surveys for certain species to supplement the modeling results and to refine the impact analysis. It is important to acknowledge that pre-construction or modified surveys are not equivalent to protocol surveys that are designed for maximum detectability. Unless these supplemental surveys are conducted at the appropriate time of year/conditions and sufficiently in advance of construction, their utility for use as "negative" surveys may be limited. Problems that may occur with the use of these types of surveys include the following:

- If they are conducted in a drought period, plant populations may not be detected adequately characterized and could cause construction delays of the project. Having at least two years of site-specific surveys (e.g., spring of 2016 and 2017) would greatly enhance the reliability of the modeling and related impact analyses;

- Scheduling surveys too early or too late can allow for situations to develop and delay construction (e.g., establishment of pre-natal dens, detection of unexpected plant populations).

Because CDFW must determine an estimate of take and impact analysis for State-listed species to issue an ITP, we recommend a two-pronged survey approach that consists of protocol then pre-construction verification surveys at appropriate times for a given species. We recommend that this approach be discussed and incorporated where appropriate in the DEIR/EIS. CDFW recommends the use of protocol surveys for all State-listed species in appropriate habitat features, once project right-of-way is secured by the Authority. CDFW is available to meet to discuss what types of surveys are acceptable for State-listed species. Alternatively, the Authority can assume presence of State listed species in all suitable habitat features.

Use of Model for Identifying Mitigation

We understand that the Authority intends to use model output to develop a compensatory mitigation program to address permanent impacts to State-listed species. CDFW acknowledges that modeling can be very useful to identify regionally important areas where conservation could be targeted for general (i.e., non-mitigation) purposes and also to help focus where additional information is needed to accurately determine site-specific impacts and appropriate mitigation. Mitigation based primarily on regional modeling may not fit individual species requirements under CESA very well, especially if protocol surveys have not been conducted (and are not planned) for the impacted area and/or the proposed mitigation lands. Regionally based approaches for CESA mitigation typically occur in NCCPs, where site-specific surveys and management, monitoring and reporting requirements for habitat and species are built into the program. Because CESA requires that impacts be fully mitigated, mitigation for impacts to habitat occupied by State-listed species should include occupied habitat. For example, it is our understanding that for some species the current approach is to mitigate for multiple species simultaneously (e.g., desert tortoise and Mojave ground squirrel). This approach may not be acceptable unless presence for both species is adequately documented on the proposed mitigation lands and the take for each species is fully mitigated.

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 CNDDB. The CNDDB field survey form can be found at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at: https://www.wildlife.ca.gov/Data/CNDDB/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 & G. 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). Please see the enclosed Mitigation Monitoring (MMRP) table which corresponds with recommended mitigation measures in this comment letter. If you have any questions, please contact Ms. Primavera Parker, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (559) 243-8142, or by e-mail at Primavera.Parker@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

Attachment

ec: See Page Thirty-six

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Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: California High-Speed Rail Project (Bakersfield to Palmdale Section)

SCH No.: 2009082062

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
Before Disturbing Soil or Vegetation	
Mitigation Measure: Fully Protected Raptor Habitat Assessment	
Mitigation Measure: Fully Protected Raptor Surveys	
Mitigation Measure: Fully Protected Raptors Avoidance	
Mitigation Measure: SWHA Habitat Assessment	
Mitigation Measure: SWHA Surveys	
Mitigation Measure: SWHA Avoidance	
Mitigation Measure: SWHA Nest Tree Mitigation	
Mitigation Measure: SWHA Compensation for Loss of Foraging Habitat	
Mitigation Measure: SWHA Take Authorization	
Mitigation Measure: TRBL Habitat Assessment	
Mitigation Measure: TRBL Surveys	
Mitigation Measure: TRBL Avoidance	
Mitigation Measure: TRBL Take Authorization	
Mitigation Measure: BNLL Surveys	
Mitigation Measure: BNLL Avoidance	
Mitigation Measure: DETO surveys	
Mitigation Measure: DETO Take Authorization	
Mitigation Measure: SJKF Take Authorization	
Mitigation Measure: SJKF Compensatory Mitigation	
Mitigation Measure: MGS Surveys	

RECOMMENDED MITIGATION MEASURE	**STATUS/DATE/INITIALS**
Mitigation Measure: MGS Avoidance	
Mitigation Measure: MGS Take Authorization	
Mitigation Measure: CRLF Habitat Assessment	
Mitigation Measure: CRLF Survey	
Mitigation Measure: CRLF Avoidance	
Mitigation Measure: Western Pond Turtle Surveys	
Mitigation Measure: Western Pond Turtle Avoidance	
Mitigation Measure: Western Spadefoot Toad Surveys	
Mitigation Measure: CBB Surveys	
Mitigation Measure: CBB Take Avoidance	
Mitigation Measure: Joshua and Oak Tree Woodland Habitat Compensation and Preservation	
Mitigation Measure: Special-Status Plant Habitat Assessment	
Mitigation Measure: Special-Status Plant Surveys	
Mitigation Measure: Special-Status Plant Avoidance	
Mitigation Measure: Special-Status Plant Take Authorization	
Mitigation Measure: Desert Kit fox survey	
Mitigation Measure: Desert Kit avoidance	
During Construction	
Mitigation Measure: Fully Protected Raptors Avoidance	
Mitigation Measure: SWHA Avoidance	
Mitigation Measure 12: TRBL Avoidance	
Mitigation Measure: BNLL Avoidance	
Mitigation Measure: MGS Avoidance	
Mitigation Measure: CRLF Avoidance	
Mitigation Measure: Western Pond Turtle Avoidance	
Mitigation Measure: CBB Take Avoidance	
Mitigation Measure: Special-Status Plant Avoidance	
Mitigation Measure: Desert kit fox avoidance	