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June 23, 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, San Jose to Merced Section (Project) Draft Environmental Impact Report/Environmental Impact Study (DEIR/EIS)
SCH No. 2009022083

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 (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.

[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.

- Staff Recommended Preferred Alternative (Alternative 4) San Jose to Merced on August 22, 2019.
- ADEIR/EIS Cooperating Agency review of the Bakersfield to Palmdale Section on November 18, 2019.
- ADEIR/EIS Cooperating Agency review of the San Jose to Merced Section on December 23, 2019 and February 13, 2020.
- Revised Draft Supplemental EIR/EIS for the Merced to Fresno on April 27, 2020.
- Draft EIR/EIS for the Bakersfield to Palmdale Section on April 28, 2020.

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) and in providing early consultation during the preparation of the EIR, focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources.

PROJECT DESCRIPTION SUMMARY

Proponent: The Authority

Objective: The San Jose to Merced Project Section (Project Section) would provide High-Speed Rail (HSR) service from Scott Boulevard, just north of the San Jose Diridon Station, to a station in downtown Merced. The Project Section consists of three separate portions: San Jose to Central Valley Wye, Central Valley Wye, and Ranch Road to Merced. The portion of the Project Section analyzed in the *San Jose to Merced Project Section Draft Environmental Impact Report (DEIR)/Environmental Impact Statement (EIS)* is from Scott Boulevard, just north of San Jose Diridon Station, to Carlucci Road. This is referred to as the San Jose to Central Valley Wye Project Extent (Project or Project Extent). It would extend approximately 90 miles, passing through Santa Clara, San Benito, and Merced Counties and the cities of Santa Clara, San Jose, Morgan Hill, Gilroy, and Los Banos.

The approximately 90-mile project extent of the 145-mile-long Project Section comprises mostly dedicated HSR system infrastructure, HSR station locations at San Jose Diridon and Gilroy, a maintenance of way facility (MOWF) either south or southeast of Gilroy, and a maintenance of way siding (MOWS) west of Turner Island Road in the Central Valley. HSR stations at San Jose Diridon and Gilroy would provide links with regional and local mass transit services as well as connectivity to the Santa Clara County and Central Valley highway network. The Project Extent comprises the following five subsections: 1) San Jose Diridon Station Approach—Extends approximately 6 miles from north of San Jose Diridon Station at Scott Boulevard in Santa Clara to West Alma Avenue in San Jose. This subsection includes the San Jose Diridon Station. 2) Monterey Corridor—Extends approximately 9 miles from West Alma

Avenue to Bernal Way in the community of South San Jose. This subsection is entirely within the city of San Jose. 3) Morgan Hill and Gilroy—Extends approximately 30 miles from Bernal Way in the community of South San Jose to Casa de Fruta Parkway/State Route (SR) 152 in Santa Clara County. 4) Pacheco Pass—Extends approximately 25 miles from Casa de Fruta Parkway/SR 152 to east of Interstate (I-) 5 in unincorporated Merced County. 5) San Joaquin Valley—Extends approximately 20 miles from I-5 to Carlucci Road in unincorporated Merced County.

There are four end-to-end project alternatives (Alternative 1 to 4), including stations. The Authority's Preferred Alternative under National Environmental Policy Act (NEPA), which serves as the proposed project for CEQA, is Alternative 4. It includes two stations (San Jose Diridon and Downtown Gilroy), MOWF, MOWS, two tunnels and attraction power facilities.

Location: The Proposed San Jose to Merced Project Section is located in Santa Clara, San Benito, and Merced Counties near the cities of Santa Clara, San Jose, Morgan Hill, Gilroy, and Los Banos. The project extends from Scott Boulevard in Santa Clara County (lat/long 37° 21' 48.996 "N/121° 57' 36"W) to Carlucci Road in Merced County (lat/long 37° 5' 28.716"N/120° 40' 15.6"W). The nearest major state highways are SR 33, SR 85, SR 87, SR 89, SR 152 165, U.S. Highways 10, I-5, I-280, and I-880.

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.

Construction and operation of the HSR will create barriers to wildlife movement, which may result in potentially significant impacts, impacts to hunting and public use, impacts to wildlife habitat linkages, and impacts to a multitude of waterfowl that travel the Pacific Flyway. Additionally, the proposed Project may significantly impact CDFW owned and managed lands, sensitive and listed species, and rare habitats. The construction and operation of the HSR through the Grassland Ecological Area (GEA) and CDFW-owned lands is incompatible with the public trust uses for which these lands were acquired by both the State of California and through its Federal partnership.

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 will be enforceable or sufficient in reducing impacts to a level that is less than significant.

CDFW is concerned regarding these project impacts and the adequacy of the proposed mitigation measures for special-status species including, but not limited to the State and Federally Endangered Fresno kangaroo rat (*Dipodomys nitratoides exilis*); State Threatened and Federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); State and Federally Threatened California tiger salamander (*Ambystoma californiense*) and giant garter snake (*Thamnophis gigas*); State Threatened Swainson's hawk (*Buteo Swainsonii*), tricolored blackbird (*Agelaius tricolor);* State Endangered/State Fully Protected and Federal Threatened California condor (*Gymnogyps californianus*); State Threatened/Fully Protected greater sandhill crane (*Grus canadensis tabida*); State Endangered/Fully Protected and Federally Endangered blunt-nosed leopard lizard (*Gambelia sila*); State Endangered/Fully Protected bald eagle (*Haliaeetus leucocephalus*); State Fully Protected American Peregrine falcon (*Falco peregrinus anatum*), ringtail (*Bassariscus astutus*), white-tailed kite (*Elanus leucurus*), and golden eagle (*Aquila chrysaetos*); State Species of Concern and Federally Threatened California red-legged frog (*Rana draytonii*); State Species of Concern Western pond turtle (*Emys marmorata pallida*), and San Francisco dusty-footed woodrat; and the State Candidate Species for listing foothill yellow-legged frog (*Rana boylii*), mountain lion (*Puma concolor*) (Central Coast North/Central Coast Evolutionarily Significant Units), Crotch bumble bee (*Bombus crotchii*), and Western bumble bee (*Bumbus occidentalis occidentalis*). These concerns are discussed in more detail below.

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 3.7.8 BIO-MM#48: Conduct Pre-Construction Surveys for Eagles BIO-MM#49: Implement Avoidance Measures for Active Eagle Nests, BIO-MM#50: Provide Compensatory Mitigation for Loss of Eagle Nests, BIO-MM#51: Implement Avoidance Measures for California Condor page158-160and BIO-MM#83: Implement Removal of Carrion that May Attract Condors and Eagles Page 172

The State Fully Protected (SFP) white-tailed kite, golden eagle, bald 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 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. The electrical components of the train system (e.g., the overhead catenary 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 advises 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 at individual Project work areas prior to Project implementation. To avoid impacts to these species, CDFW recommends conducting these surveys in accordance with standard protocols (CDFG 2010 and 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 biologist be on site during all ground-disturbing/construction-related activities and that a ½-mile no-disturbance buffer be implemented. If the ½-mile no-disturbance buffer cannot be implemented, consultation with CDFW to assist with 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 catenary system; CDFW advises sufficient spacing between conductors so birds cannot bridge conductors with their wingspan, designing poles to exclude closely spaced energized parts, and installing perch guards to deter birds from landing/resting.

To prevent nest abandonment and behavioral disturbance, CDFW recommends consultation prior to construction-related uses of helicopters. CDFW also recommends avoidance of nighttime construction activities and that all permanent lighting for

long-term operation of the HSR be designed and installed such that it does not spill out from the HSR 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 safe to do so, to prevent the threat of bird strikes should eagles and condors attempt to forage on carrion during operational periods.

COMMENT 2: Swainson's Hawk (SWHA)

Section 3.7.8 BIO-MM#54: Implement Avoidance and Minimization Measures for Swainson's Hawk Nests page 158 and BIO-MM#55-Provide Compensatory Mitigation Loss of Swainson's Hawk Nesting Trees and Habitat Page 159

SWHA are known to nest within and in the vicinity of the Project area and foraging habitat (grasslands and croplands) for SWHA also exists within and in the vicinity of the Project area. The California Natural Diversity Database (CNDDB) indicates SWHA occurrences throughout Merced, Santa Clara, and San Benito counties (CDFW 2020).

SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley and Coyote Valley limits their local distribution and abundance (CDFW 2016). The Project as proposed will involve noise, groundwork, use of heavy machinery, and high levels of human activity that could affect nests and has the potential to result in nest abandonment, significantly impacting nesting SWHA in the Project vicinity. 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.

CDFW acknowledges that BIO-MM#53 requires a pre-activity survey for suitable SWHA nesting habitat. However, the DEIR/EIS should define the restrictive no-work buffer size, in BIO-MM#54, 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 buffer. If SWHA are detected and the implementation of a no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take.

BIO-MM#55 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.

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 Project areas in advance of Project implementation to determine if the Project area or Project vicinity contains 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 activities.

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 Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b) is may be warranted 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 3.7.8 BIO-MM#56: Conduct Surveys and Implement Avoidance Measures for Active Tricolored Blackbird Nest Colonies andBIO-MM#57: Provide Compensatory Mitigation for Impacts on Tricolored Blackbird Habitat pages 161-162

The DEIR/EIS acknowledges that TRBL have the potential to occur within or near the Project. The Project bisects habitat for TRBL and is adjacent to known TRBL colony locations in Merced, Santa Clara and San Benito counties that contains annual grasslands, dairies, pastures, wetlands, and field crops (CDFW 2020).

MM#56 proposes that to the extent practicable, a 300-foot no disturbance buffer will be implemented around nesting TRBL colonies. However, MM#56 goes on to state that the 300-foot buffer could 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). In 2017, approximately 30,000 TRBL were distributed among only sixteen colonies in Merced County (Meese 2017). Nesting can occur synchronously, with all eggs laid within one week (Orians 1961). For these reasons, depending on timing, disturbance to nesting colonies can cause abandonment, significantly impacting TRBL populations (Meese et al. 2014). One of the largest colony populations (30,000 birds) to date was observed in the vicinity of the Project along Henry Miller Road.

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 Project areas in advance of Project activities, 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 advised to discuss how to implement the Project and avoid take, or if avoidance is not feasible, acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b), would be warranted prior to any ground- or vegetation-disturbing activities.

COMMENT 4: Blunt-Nosed Leopard Lizard (BNLL)

Section 3.7.7.2 Impact BIO#12: Permanent Conversion or Degradation of Habitat and Direct Mortality of Blunt-Nosed Leopard Lizard Page 81 and Section 3.7.8 BIO-MM#39: Provide Compensatory Mitigation for Blunt-nosed Leopard lizard Habitat Page 155

The DEIR/EIS states, "While some protections would be implemented, the potential for physical harm and mortality of individuals would not be eliminated." 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 Project 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." CDFW is unclear how the Project Biologist will

reliably determine that buffer reduction will have no impact on BNLL. Absent scientific demonstration that burrow avoidance of less than 50 feet can be implemented with a high level of assurance that BNLL will not be impacted, CDFW is concerned that reduction of the 50-foot no-work buffer increases the risk of take of this SFP species.

CDFW recommends that the Lead Agency not overlook that CDFW has jurisdiction over SFP species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any SFP 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 ground- or vegetation-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 SFP species if such surveys do not detect any BNLL 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, CDFW has not approved the use of conservation dogs for BNLL scat detection as a stand-alone survey effort to attempt 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: Garter Snake (GGS)

Section 3.7.8 BIO-MM#41: Conduct Pre-Construction Surveys and Implement Avoidance and Minimization Measures for Giant Garter Snake and BIO-MM#42: Provide Compensatory Mitigation for Impacts on Giant Garter Snake Habitat Page 156

As documented in the California Natural Diversity Database (CNDDB), GGS are known to occur in the San Joaquin River (SJR) and tributaries that feed into the SJR in Merced County (CDFW 2019). Potentially significant impacts associated with viaduct, bridge or culvert construction/replacement include burrow excavation and collapse, inadvertent entrapment, and direct mortality of individuals. Currently, GGS are isolated to only nine disjunct populations. At the time of the species listing in 1993 under the Federal

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

The DEIR/EIS identifies the potential for GGS to occur within the Project footprint, CDFW recommends conducting the following evaluation of the Project area, 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 Project areas in advance of Project activities, to determine if the Project area or its vicinity contains suitable habitat for GGS.

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

Capture and relocation of any species listed under CESA would require an ITP from CDFW, as capture (or attempt to do so) is defined as take under Fish and Game Code section 86. If take cannot be avoided, take authorization through acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) would be necessary to comply with CESA.

COMMENT 6: Foothill Yellow-Legged Frog (FYLF)

BIO-MM#34: Conduct Pre-Construction Surveys and Implement Avoidance and Minimization Measures for Foothill Yellow-Legged Frog and BIO-MM#35: Provide Compensatory Mitigation for Impacts on Foothill Yellow-Legged Frog Habitat page 154

On July 7, 2017, the Fish and Game Commission published its acceptance of a petition for consideration and designation of the FYLF as a candidate species. 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 FYLF, pursuant CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, Section 15380, the status of the FYLF as a threatened candidate species under CESA (Fish and G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. Consequently, take of FYLF during the status review period is prohibited unless take authorization pursuant to Fish and Game Code section 2081 subdivision (b) is obtained. FYLF are found in the vicinity of streams in a variety of habitats (valley-foothill hardwood, valley-foothill hardwood-conifer, valley foothill riparian, coastal scrub, mixed chaparral, and wet meadow types). Potentially significant impacts associated with Project activities include inadvertent entrapment, destruction of eggs and oviposition (i.e., egg-laying) sites, degradation of water quality, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals. Land use changes that result in degradation or destruction of riparian habitat, road development and use, urbanization, and water diversion are among proximate factors contributing to local declines of FYLF (Thomson et al. 2016, USDA 2016). FYLF have been estimated to be extirpated from 45% of historically occupied locations in California in general (Jennings and Hayes 1994 *in* Thomson et al. 2016). A 2010 study of Upper Coyote Creek in Santa Clara County identified FYLF using Coyote Creek and its tributary for breeding and residency (Gonsolin 2010).

The DEIR/EIS lacks a mitigation measure that would require a habitat assessment for FYLF. CDFW recommends including 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 the Project areas in advance of Project activities, to determine if the Project area or its vicinity contains suitable habitat for FYLF.

If it is determined though site assessment that habitat suitable to support FYLF is present within or near Project, CDFW recommends that focused visual encounter surveys be conducted by a qualified biologist during appropriate survey period(s) (April through October) in areas where potential habitat exists. CDFW advises that these surveys generally follow the methodology described in pages 5–7 of "*Considerations for Conserving the Foothill Yellow-Legged Frog"* (CDFW 2018a). In addition, CDFW advises surveyors to adhere to "*The Declining Amphibian Task Force Fieldwork Code of Practice*" (DAPTF 1998). CDFW recommends the full habitat assessment and survey results be submitted to CDFW when completed. If any life stage of FYLF is detected, consultation with CDFW is advised to determine if full avoidance for the species can be achieved or if acquisition of an ITP is necessary to comply with CESA.

COMMENT 7: California Red-Legged Frog (CRLF)

Section 3.7.8 BIO- BIO-MM#32: Conduct Pre-Construction Surveys and Implement Avoidance and Minimization Measures for California Red-Legged Frog

and BIO-MM#33: Provide Compensatory Mitigation for Impacts on California Red-Legged Frog Habitat Pages 153-154

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 (> 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 (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). The DEIR/EIS acknowledge the potential for CRLF to occur in the Project area and the potential for impacts, however the extent of the impacts is insufficient.

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 activities, to determine if the Project area 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 8: California Tiger Salamander (CTS)

BIO-MM#29: Conduct Pre-Construction Surveys for California Tiger Salamander, BIO-MM#30: Implement Avoidance and Minimization Measures for California Tiger Salamander and BIO-MM#31: Provide Compensatory Mitigation for Impacts on California Tiger Salamander Habitat pages 152-153

CTS are known to occur in the Project footprint (CDFW 2020). The Project is within the range of CTS and suitable habitat (i.e., aquatic breeding habitat, grasslands interspersed with burrows) and the Project occurs within upland and breeding habitat. Due to the potential ground-disturbing activities, potential Project-related impacts include but are not limited to the following: collapse of small mammal burrows, inadvertent entrapment, loss of upland refugia, water quality impacts to breeding sites, reduced reproductive success, reduction in health, and direct mortality of individuals. Up to 75% of historic CTS habitat has been lost to development (Searcy et al. 2013). Loss, degradation, and fragmentation of habitat are the primary threats to CTS. Contaminants and vehicle strikes are also sources of mortality for the species (CDFW 2015a, USFWS 2017a). CTS have been determined to be physiologically capable of dispersing up to 1.5 miles from seasonally flooded wetlands (Searcy and Shaffer 2011). Given the presence of suitable habitat within and surrounding the Project, Project activities have the potential to significantly impact local populations of CTS.

Because suitable habitat for CTS is present throughout the Project area, CDFW recommends conducting the following evaluation of the Project area, 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 assess the Project area to evaluate the potential for CTS. CDFW recommends the qualified biologist determine the impacts of Project-related activities to CTS upland and breeding habitat features within and/or adjacent to the construction footprint.

In all areas of the Project footprint where suitable breeding or upland refugia habitat is present, protocol-level surveys are advised to be conducted in accordance with the USFWS “Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander” (USFWS 2003). CDFW recommends that survey findings be submitted for review. In order for a negative finding for CTS to be accepted, CDFW must make a determination whether it will accept negative findings based on whether there has been sufficient rainfall. In addition, acceptance of a negative finding for CTS requires protocol-level surveys for two consecutive wet seasons.

If surveys cannot be feasibly conducted as recommended in MM#29, CDFW advises that a minimum 50-foot no-disturbance buffer be delineated around all small mammal burrows in suitable habitat within and/or adjacent to the Project area. CDFW also recommends delineating a 250-foot no disturbance buffer around potential breeding pools and avoiding any impacts that could alter the hydrology or result in sedimentation of breeding pools. If avoidance is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take.

If through surveys it is determined that CTS are occupying or have the potential to occupy the Project area and take of the species cannot be avoided as recommended, take authorization through acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) would be necessary to comply with CESA. Alternatively, in the absence of protocol surveys, presence of CTS can be assumed within the Project footprint and an ITP from CDFW can be obtained prior to initiation of vegetation- or ground-disturbing Project activities.

COMMENT9: Crotch Bumble Bee (CBB) and Western Bumble Bee (WBB)

Section 3.7.7.2 Impact BIO#5: Permanent Conversion or Degradation of Habitat for and Mortality of Crotch Bumble Bee Page 223 and Section 3.7.8 BIO-MM#23 Conduct Surveys and Implement Avoidance Measures for Crotch Bumble Bee and BIO-MM# 24 Provide Compensatory Mitigation for Impacts on Crotch Bumble Bee Pages 149-150

In June, 2019, the Fish and Game Commission published findings of its decision to advance CBB and WBB 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 and WBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, section 15380, the status of the CBB and WBB as an endangered candidate species under CESA (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. Consequently, take of CBB or WBB during the status review period is prohibited unless authorization pursuant to CESA is obtained. The Project falls within the northern range of the CBB, and there are also historic observations of CBB in both Santa Clara and Merced Counties. Habitat is present for overwintering, nesting and foraging and impacts to this species and its habitat is recommended to be analyzed. Similarly, CNDDB records of WBB have been reported adjacent to the Project footprint (CDFW 2020) and impacts to this species and its habitat should be analyzed as the species was not included in the DEIR/EIS. Potentially significant impacts associated with HSR activities include removal of nest sites, floral resources for foraging and removal of overwintering sites.

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 WBB nests, forages, and overwinters in meadows and grasslands with abundant floral resources and may be found in some natural areas within urban environments (Williams et al, 2014). CDFW recommends language describing the life history and habitat requirements of the WBB, and information regarding the field evaluation of suitable habitat within and adjacent to the Project area. Disclosure of habitat requirements and the presence or lack of habitat within and adjacent to the Project area enables adequate evaluation of the impact of construction and operations of the HSR on the species.

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#23 indicate using non-lethal netting method to capture CBB. Netting is a form of capture which is a form of take under CESA; therefore, acquisitions of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b), is required for conducting surveys under this method. To evaluate potential impacts to CBB and WBB 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 or WBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.

COMMENT 10: Fresno Kangaroo Rat (FKR)

3.7.8 BIO-MM#62: Implement Avoidance and Minimization Measures for Fresno Kangaroo Rat and BIO-MM#63: Provide Compensatory Mitigation for Impacts on Fresno Kangaroo Rat Page 163

While there has not been a confirmed FKR observation since 1992 (USFWS 1998c), CDFW does not consider this species to be extirpated and the Project is within historical range for this species. Habitat for this species is described as sands and saline sandy soils in chenopod scrub and annual grassland communities on the valley floor and large acreages of functionally suitable habitat for the species occur within the Project area. The project area is not only considered to contain historical habitat for this species, but

it is also thought to have the highest potential for containing an extant population of Fresno kangaroo rat (U.S. Fish and Wildlife Service 1998). If this species is detected during surveys, consultation with CDFW is warranted. Any occupied habitat should be completely avoided to preclude the potential for a jeopardy analysis and the occupied habitat should be permanently protected (USFWS 1998a). This would be consistent with Fresno kangaroo rat Recovery Action 6 of the Recovery Plan for Upland Species of the San Joaquin Valley, which is to conserve natural lands in western Madera and Merced Counties and acquire fee title or easement to appropriate parcels from willing sellers (U.S. Fish and Wildlife Service 1998). Further, any impacts to habitat or the potential for this species to be impacted need to be fully analyzed and should be discussed in the in the DEIR/EIS.

BIO-MM#62 indicates that live trapping would be used to survey areas within the footprint where these species may occur. Typical kangaroo rat home ranges are much smaller than 1 acre and because good quality functional habitat within the Project footprint may still support this possibly extinct sub-species, CDFW advises that protocol-level surveys with all night trapping (with checks every 3 hours) be conducted by a qualified biologist that is permitted to do so by CDFW and USFWS in advance of any ground-disturbing activities will impact kangaroo rat burrows. CDFW also advises that survey results be submitted to CDFW and USFWS for review. If this species is detected within the Project area either during protocol-level or pre-construction surveys or during construction activities, all Project activities should cease and consultation with CDFW commence to determine if full avoidance can occur. If full avoidance is not feasible, acquisition of an ITP pursuant to Fish and Game Code section 2081 subdivision (b) would be warranted and relocation efforts to minimize the impact of the taking would be required along with compensatory mitigation to fully mitigate for the species. However, for the reasons stated above full avoidance of the species should be implemented.

MM#63 indicates mitigation for the species is expected to occur at a minimum 1:1 ratio for potentially suitable habitat. CDFW does not concur that this minimum ratio is adequate to fully mitigate for this species.

When describing trapping, exclusion fencing, vegetation trimming, and relocating CESA-listed species in the mitigation measures, please state that these activities will likely result in take (as defined in Fish and G. Code § 86) and that prior to implementation of these measures acquisition of an ITP pursuant to Fish and Game Code section 2081 subdivision (b) is warranted.

COMMENT 11: San Joaquin Kit Fox (SJKF)

Section 3.7.8 BIO-MM#60-Implement San Joaquin Kit Fox Avoidance and Minimization Measures and BIO-MM#61: Provide Compensatory Mitigation for impacts on San Joaquin Kit fox habitat Pages 160-161

MM#60 indicates disturbance of all SJKF dens would be avoided to the extent feasible and if detected in the work site, the Project Biologist would request approval from USFW and CDFW to capture and relocate the SJKF if it does not leave by its own volition. If SJKF cannot be avoided and there is a need for capture and relocation, an ITP would be warranted. This measure also proposes installation of artificial dens that would be located on parcels owned by the Authority or at locations where access is available. CDFW requests additional information on the monitoring requirement of the artificial dens and if they would be managed in perpetuity.

The DEIR/EIS proposes habitat will be replaced at a minimum ratio of 1:1 for high- or moderate-value suitable habitat (natural lands) and at a ratio of 0.5:1 for low-value suitable habitat (urban or agricultural lands), unless a higher ratio is required by regulatory authorizations issued under the FESA and CESA. Please note, 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.

Finally, CDFW is concerned all four alternatives would result in significant and irreversible impacts to SJKF by impacting the entire northern range of the species. The Project would create a significant movement barrier between the southern and northern range of SJKF populations. The Santa Nella area has been identified by CDFW and the United States Fish and Wildlife Service (USFWS) as a narrow band in the connectivity between the northern and southern populations of San Joaquin kit fox (USFWS 2010). There is a very narrow area remaining in the Santa Nella vicinity that is usable for San Joaquin kit fox north-south movement, and the Project would sever this remaining movement area. The HSR Project also has the potential to isolate the Los Banos Valley core SJKF population from the northern population of San Joaquin kit fox. The ability of individuals from the Los Banos Valley to breed with members of more northern SJKF populations is thought to be critical to the continued existence and genetic diversity of the northern SJKF population. Maintaining SJKF movement corridors will be essential to permit the proposed project pursuant to CESA.

In addition, there are several movement corridors and habitat lands protected in perpetuity as mitigation for impacts to SJKF movement and habitat resultant of other projects in the Santa Nella area. As proposed, the HSR alignment would sever one or more of these SJKF mitigation areas and render them ineffective in serving their mitigation purpose.

COMMENT 12: Mountain Lion

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. Mountain lion were observed crossing under SR 152 in the Pacheco Pass and within the Pacheco Creek Reserve in a February 2020 Wildlife Permeability SR-152 Study conducted by the Pathways for Wildlife for the SCVHA. The Project alignment transects the Southern California ESU and two of the genetically distinct mountain lion subpopulations (Central Coast North and Central Coast). Therefore, CDFW advises analyzing Project impacts to the subpopulations, including issues with connectivity and fragmentation of habitat which would be furthered impaired through the construction and operation of the Project. 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 13: Oak Tree Woodland and Sycamore Alluvial Woodland Habitat

Section 3.7.7.4 Impact BIO#35: Permanent Conversion or Degradation of Special-Status Plant Communities page 103 and Impact BIO#36: Intermittent Disturbance or Degradation of Special-Status Plant Communities during Operations page 103 and Section 3.7.7.6 Impact BIO#40: Removal or Mortality of Trees Protected under Municipal Tree Policies or Ordinances Page 109, Section 3.7.7.9 Impact BIO#53: Conflict with Santa Clara Valley Habitat Plan (SCVHP) page 124-126

Section 3.7.8 BIO-MM#72: Provide Compensatory Mitigation for Permanent Impacts on Riparian Habitat page and BIO-MM#85: Provide Compensatory Mitigation for Impacts on California Sycamore Woodland at the Pacheco Creek Reserve 172-173

The Project will (1) permanently impact approximately 9.4 acres and temporarily impact 3.2 acres of California sycamore (dominated by *Platanus racemosa*) alluvial woodland habitat and (2) will permanently impact approximately 398 acres and temporarily impact 115.7 acres of oak (*Quercus spp.*) woodland habitat resulting in a net loss of two valuable habitat types. Sycamore alluvial woodland and oak woodland are considered a California Native Plant Society S3 ranked rare vegetation community that has limited distribution in California. Project implementation would result in a substantial adverse impact, either directly or through habitat modifications. The Project crosses over and

runs parallel to Pacheco Creek which supports one of the few extant populations of sycamore alluvial woodland, a very rare habitat type designated as G1 and S1.1 (Critically Imperiled) under the ranking system used in the CNDDB. This natural community is currently experiencing a die back as a result of unknown factors; highlighting the need to avoid additional stressors from new impacts.

The Project bisects the Pacheco Creek Reserve with a viaduct in Pacheco Creek and tunnel portal openings in the vicinity of the Pacheco Creek Reserve. These Reserve lands are protected by a permanent conservation easement and implementation of the Project will further fragment the Sycamore Alluvial woodland potentially impacting recruitment, reproduction, and expansion in the Pacheco Creek Reserve. Furthermore, there is a conflict with the Santa Clara Valley Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) and implementation of the compensatory mitigation for the removal of California sycamore woodland. Impact BIO#53 states, "Consequently, meeting the combined mitigation needs for the SCVHP and HSR is feasible and there is no conflict between the Santa Clara Valley Habitat Agency (SCVHA) and the Authority in terms of the limited availability of California sycamore woodland for preservation." CDFW does not concur and is concerned that the conflict will not be resolved and that the lack of availability of remaining sycamore alluvial woodlands will potentially preclude the ability of the SCVHA and the Authority in fulfilling both combined compensatory mitigation needs.

MM#85 states the following, "To offset permanent impacts at the Pacheco Creek Reserve and alleviate conflict with the SCVHP, the Authority would provide compensatory mitigation at a 1:1 ratio." CDFW does not concur that the proposed ratio will sufficiently reduce the level of significance of the permanent and temporary impacts to Sycamore Alluvial Woodlands through the implementation of the Project. The proposed mitigation ratio does not take into consideration that temporary impacts and fragmentation of the Pacheco Creek Reserve could potentially reduce the long term viability of the Sycamore Alluvial woodlands within the Reserve.

The DEIR/EIS lacks analysis and mitigation for the temporal loss off sycamore alluvial woodland and oak woodland habitat and does not include a specific and enforceable avoidance buffer for oak and sycamore trees. 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 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, oak woodlands needs to be considered in its entirety when considering mitigation to replicate the habitat function. This would require a combination of preservation and possibly restoration. In the case of proposed restoration, 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 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 sycamore alluvial and oak woodland mitigation areas should be protected against anthropogenic impacts for the life of the project. CDFW recommends mitigation lands be permanently preserved through a conservation easement and adequate funding set aside in an endowment to ensure the mitigation lands are managed in perpetuity. The proposed specific mitigation location should be identified in order to ensure that mitigation is not deferred until some future time.

COMMENT 14: Special-Status plants

Section 3.7.7.2-Section 3.7.8 BIO-MM# 7 Conduct Botanical Field Surveys for Special-Status Plant Species and Special-Status Plant Communities and BIO-MM# 8 Prepare and Implement Plan for Salvage and Relocation, and/or Propagation of Special-Status Plant Species Page 138

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 Alkaline wetlands support varied plant communities, sometimes including rare plants such as saline clover (*Trifolium depauperatum* var. *hydrophilum*) which was thought to be extinct until it was recently rediscovered. Alkaline wetlands are known to occur in Santa Clara and Merced Counties and might be present in adjacent counties.

The DEIR/EIS reconnaissance surveys were conducted in 2016 in which qualitative information on vegetation was collected. The DEIR/EIS acknowledges that access for significant portions of the Project footprint were not available and that no protocol level surveys presence-absence surveys were conducted; therefore, CDFW recommends mapping areas to show where field work was conducted versus areas which were analyzed through non-field work methods.

Although the DEIR/EIS requires 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. MM#8 also states that the mitigation plan has the potential to include plant relocation or seed collection, which would be considered take, pursuant to Fish and Game Code section 1908. 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 activities to determine if the Project or the immediate vicinity contain suitable habitat for special-status plant species and special status plant communities. 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 through acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (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 would be determined though the ITP process.

Comment 15: South-Central California Coast (S-CCC) Evolutionarily Significant Unit (ESU) steelhead (*Oncorhynchus mykiss irideus*)

BIO-MM#26: Prepare and Implement a Cofferdam Fish Rescue Plan, BIO-MM#27: Prepare and Implement an Underwater Sound Control Plan, BIO-MM#28: Provide Compensatory Mitigation for Permanent Impacts on Steelhead Habitat and Essential Fish Habitat (EFH) for Pacific Coast Salmon Pages 150-152

During normal and wet years, Pacheco Creek can support a run of South-Central California Coast (S-CCC) Evolutionarily Significant Unit (ESU) steelhead (*Oncorhynchus mykiss irideus*). Impact #6 indicates, "The impact under CEQA would be significant for all four alternatives because the project could have a substantial adverse effect, through both direct mortality and habitat modification, on steelhead, Pacific lamprey, and EFH for Pacific Coast salmon." However, BIO-MM#28 defers mitigation through plans, "Conservation options developed to offset impacts to steelhead habitat and EFH would be considered in the development of the Compensatory Mitigation Plan (BIO-MM#10), Restoration and Revegetation Plan (BIO-MM#1) and Flood Protection Plan (HYD-IAMF#2).

The Pacheco run is very tenuous due to historic conditions (the run was likely episodic rather than yearly) and current water operations from Pacheco Reservoir. Due to the current condition of the run and its significance, it is critical that care be taken to avoid impacts entirely to Pacheco Creek.

COMMENT 16: Section 3.7.2 Laws, Regulations and Orders Pages 7-11

Missing from this section is the Omnibus Public Land Management Act of 2009 (16 U.S.C. §§ 10001-10203). The Omnibus Public Land Management Act (Public Law 111-11) was signed into law by President Obama on March 30, 2009, and includes the San Joaquin River Restoration Settlement Act (16 U.S.C. §§ 10001-10011), which authorizes implementation of the San Joaquin River Restoration Settlement (*Natural Resources Defense Council, et al., v. Kirk Rodgers, et al. Settlement Agreement* (Settlement)). The San Joaquin River Restoration Program (SJRRP) was initiated in accordance with the terms and conditions of the Settlement. The SJRRP is a comprehensive long-term effort to restore flows to a 153-mile- long portion of the San Joaquin River from Friant Dam to the confluence of the Merced River. The SJRRP goals are to restore a self-sustaining Chinook salmon fishery while reducing or avoiding adverse water supply effects from restoration flows. The implementing agencies of the SJRRP include the U.S. Bureau of Reclamation (USBR); USFWS; National Marine Fisheries Service (NMFS); California Department of Water Resources (DWR); and CDFW. CDFW advises including this law as well as addressing impacts to the SJRRP area and potential conflicts with its goals.

Comment 17: Section 3.7.8 BIO-MM#3 Establish Environmentally Sensitive Areas and Non-disturbance Zones Page 135

This measure lacks the specifics indicating the no disturbance buffers/distance from the resource for placement of the exclusionary fencing and ESAs. It should also be noted that implementing such a measure for special status-species (TCBL, SJKF, GGS, CTS, and FKR) could result in take in the form of capture and warrants acquisition of an ITP from CDFW prior to the use of exclusion fence in all areas with potentially suitable habitat for the above species**.**

Comment 18: Section 3.7.7.2 BIO-MM#66 Conduct Pre-Construction Surveys for San Francisco Dusky-Footed Woodrat and San Francisco Dusky-Footed Woodrat Den Sites and Implement Avoidance Measures Page 164

CDFW recommends that the avoidance buffer be a minimum of 50 feet from the edge of the San Francisco dusky-footed woodrat nest. If implementation of this buffer is not feasible, removal of stick houses should not occur during the nesting season and all stick nest removal should be completed by hand.

COMMENT 19: Section 3.7.8 BIO-MM#67 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 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 20: Section 3.7.8 BIO-MM#68 Implement Bat Avoidance and Relocation Measures pages 164-165

If bats are found to occupy the Project footprint, 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 area.

Comment 21: Section 3.7.8 BIO-MM#69 Implement Bat Exclusionary and Deterrence Measures Page 165

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

Comment 22: Section 3.8 Hydrology and Water Resources (HWR)

Section 3.8 General Comments:

The DEIR/EIS and the HWR Technical Report acknowledge that surface waterbodies (e.g., streams, rivers, springs, lakes, etc.) along portions of the alignment may be at risk of dewatering during tunnel construction and other areas where deep foundations or excavations are necessary, and that no surface or subsurface data was collected along the tunnel alignments because of private property access issues. Section 3.8 and the HWR Technical Report rely on existing geologic mapping and experiences from past

tunneling projects to conclude that tunneling impacts to surface waterbodies are likely. While this past experience is valuable for evaluating expected conditions, it is no replacement for site-specific studies to confirm hydrogeologic conditions along the project alignment and with no site-specific data collected at this point in the Project and because some of the rock formations that the tunnel will pass through (i.e., Franciscan Formation) have properties that change rapidly and are hard to predict the analysis contained in the DEIR/EIS is insufficient to determine Project impacts.

The discussion of streams on Page 5-85 of HWR Technical Report and Section 3.8 of the DEIR/EIS Page 3.8-87 erroneously lumps intermittent streams with ephemeral streams as receiving no groundwater contributions to their flow regimes. Please note that a distinguishing characteristic of intermittent streams is that they receive inputs of groundwater for some period of time during the year when the groundwater table is seasonally high; however, lowering of the groundwater table during the summer months causes baseflow contributions to cease. For ephemeral streams, the groundwater table does not intersect the stream channel at any time during the year, and all streamflow is in direct response to rainfall. Intermittent streams and the role of a seasonally high-water table is important when evaluating the effects of the Project on groundwater dependent ecosystems. The failure to acknowledge the role of the groundwater table in intermittent streams appears to have led to the incorrect conclusion that the manifestation of surface hydrology effects from the project are less likely along intermittent streams than perennial streams. There is an equal to greater chance of surface hydrology impacts for intermittent streams compared with perennial stream. Water table declines to a position at or near the bottom of the channel in an intermittent stream reach, such that the rate of evapotranspiration exceeds the seepage rate of groundwater into the channel. Further lowering of the water table by project activities could have a greater impact on groundwater dependent ecosystems than for a perennial stream with ample baseflow. CDFW advises that the role of the groundwater table in intermittent streams be addressed appropriately in the environmental analysis.

The DEIR/EIS describes that direct temporary and permanent impacts to surface waterbodies are likely along above-ground portions of the route, including tunnel portal areas that will be constructed using cut-and-cover methods. Some of these areas of disturbance likely will be rather large; however, large or small, there will be direct and lasting impacts on numerous surface waterbodies where these surface-disturbing construction areas occur. Although the DEIR/EIS acknowledge the need for LSA Agreements, the extent of water bodies in the document is based on existing hydrographic datasets that show streams as a single line without acknowledging their full extent. Additionally, the use of existing data does not appear to have captured all small drainage lines that exist along the alignment, such as some first-order streams. CDFW advises that the DEIR/EIS acknowledge the full extent of all surface waterbodies. Streams may have perennial, intermittent, or ephemeral flow.

The DEIR/EIS and HWR Technical Report did not acknowledge the possibility of surface deformations above some portions of tunnels where overburden may be

relatively thin, depending on actual geologic conditions/rock mass characteristics. The possibility of surface deformations may be more likely along portions of the tunnel that are close to portals. The DEIR/EIS should take this possibility into consideration and propose mitigation measures, if needed. It is advisable to include a measure to monitor any sensitive ecosystems that may exist above portions of the tunnel with relatively thin overburden.

The DEIR/EIS and HWR Technical Report acknowledge that construction and operations will permanently impact surface water hydrology by altering drainage patterns, affecting stormwater runoff rates and volumes, and changing sediment transport/yields. The project will propose a stormwater treatment and management plan that includes flow-control devices to maintain pre-project hydrology and prevent substantial increases in runoff and sediment yields. For unimpaired waterways, the plan should strive to have a goal of no-net increase or decrease in sediment yields and a post-project hydrograph that matches the pre-project hydrograph in its timing, magnitude and duration. For impaired waterways, the Project should strive to ameliorate degraded conditions to the extent practical to offset project impacts. Where culverts and bridges will span watercourses, the Project should strive to minimize impacts on fish and wildlife passage by including structure designs that fully span the bankfull channel.

BIO-IAMF#5 Page 2-E-6

The contents of the Biological Resource Management Plan (BRMP) should explicitly include measures for protection and maintenance of water quality and quantity for special status species throughout and following construction until the hydrologic systems have stabilized and returned to pre-project conditions.

3.8.4.1 Definition of Resource Study Areas Page 3.8-11

The definition provided for the Groundwater Study Area appears to be limited to DWR Bulletin 118 basins and subbasins. Affects to groundwater within this area could affect the hydrology of springs, seeps and streams and the wildlife that depends upon those features. The analysis should include potential affects to groundwater through the Pacheco Pass segment.

Comment 23: Hydrological and Water Resources Technical Report Pages 5-79

The Project proposes to fill data gaps in the understanding of hydrogeologic conditions with geotechnical data. While some of the proposed geotechnical data will help develop an understanding of the hydrogeologic environment along the tunnel, it will not allow the Project to develop an adequate understanding of fracture-flow groundwater systems to the extent necessary to evaluate impacts to surface water bodies along the tunnel alignment. Fracture-flow groundwater systems typically are complex and require a different approach of exploration than for a geotechnical study along a tunnel alignment. The Project should not rely on the geotechnical study as the sole means of evaluating

impacts on the fracture-flow groundwater systems, which may in turn impact surface waterbodies and to the extent possible, the geomorphic floodplain of the waterbody.

Comment 24: Biological Resources Technical Report (BARTR) Comments and Recommendations:

It should be noted that CDWF along with the public did not have the accessibility to Section 3.7 as they apply to this technical report in regards to the IAMFs, species information, laws and regulations, methodologies, and mitigation measures as well as Chapter 2; along with other technical reports unless requested via email or phone call. The technical reports were not downloadable from the CHSRA's website which poses an issue of transparency and allowing for an appropriate analysis and review of the DEIR/EIS by the public, because the Technical Reports are supporting documentation to claims made in the DEIR/EIS.

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

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 Habitat Linkages
The cross-valley corridor, from the Diablo Range to the Santa Cruz Mountains in Coyote Valley, has been identified as one of only two remaining areas where linkage occurs between the San Francisco Peninsula and the rest of the State. This corridor is under significant threat from existing and planned development, including heavily used transportation infrastructure, and would be further degraded by building the HSR alignment across it. The Project has the potential to impact the three most important wildlife habitat linkages in the area as recognized in the Santa Clara HCP/NCCP. The first habitat linkage occurs in the area of Metcalf Road south of San Jose to just north of Morgan Hill. It is the northernmost habitat linkage area south of San Francisco Bay and is one of a very limited number of areas currently providing connectivity between Santa Clara and points west and the San Francisco Peninsula.

Additionally, it is the only connection between the southern end of the San Francisco Bay and the Pajaro River. There is ample evidence that this area remains a viable but highly impacted connection area. It is critical that connectivity through this area not be further reduced. The second habitat linkage occurs from Gilroy to Pacheco Pass and is essentially unblocked with the exception of SR 152. The third habitat linkage occurs in the area from the Diablo foothills to Gilroy which traverses the valley floor north of the Pajaro River. The area is crucial for steelhead passage and connectivity between watersheds in the Diablo Range, the Gabilan Range, and the Santa Cruz Mountains. These important connectivity areas identified in the Santa Clara HCP/NCCP are planned for study, enhancement and possible protection over the next 44 years. CDFW is concerned about impacts to upland and aquatic habitat near the Santa Clara Valley HCP/NCCP, as well as potential conflicts between the impacts of the HSR and the goals of the Santa Clara HCP/NCCP. CDFW recommends amphibian habitat creation/enhancement/preservation opportunities on the valley floor for mitigation to enable usable habitat that will facilitate effective gene flow between populations in the Santa Cruz Mountains and Diablo Range.

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 habitats. 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 San Jose to Merced 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.

In addition, CDFW is concerned that any changes in crossing design or location due to significant build changes with the alignment during the interim between environmental review and 80 to 90 percent (%) engineering, creates delays and impediments to ensuring functional permeability for all focal species. This could limit the ability of species such as SJKF, Tule elk, and mountain lion to move unhindered throughout their historic range. Work by James Thorne and others from the University of California, Davis, in 2002 and 2006, tracking data from mountain lion and Tule elk research and work associated with the Santa Clara Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) has specifically identified 17 corridors in Santa Clara County of significant importance. Therefore, crossing locations and design are advised to be provided and fully disclosed in the CEQA document so that CDFW can analyze the potential effectiveness of maintaining the wildlife corridors.

Elevated railways are critical in areas where the movement of wildlife is already reduced due to existing and/or proposed geographic transportation infrastructure and structural barriers such as those that exist in western Merced County near the intersections of SR 152, SR 33 and I-5.

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 at-grade embankment described in the DEIR/EIS be thoroughly analyzed as a barrier to movement, gene flow, reproductive success, loss of colonization opportunities, and to discuss this in the context of frequency, design, and location of planned wildlife crossings.

CDFW recommends considering the following for design features for dedicated wildlife crossings: minimize lengths (entry to exit) of dedicated wildlife crossings for certain species guilds and/or incorporate designs (grates, shelving, terracing, etc.) that still allow light penetration, maximize heights of crossings or add bridges for larger species guilds, provide natural cover types to encourage use, incorporate bench designs to allow use of the crossings during flooding, and provide smaller animal escape within or adjacent to the dedicated 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, tule elk, SJKF, 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 fencing infrastructure. 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 habitat 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. CDFW also agrees that wildlife movement areas (open connectivity) are also important for plant species.

Cumulative Impacts: Multiple non-transportation and transportation projects have been proposed within the, Santa Clara, San Benito, and Merced, counties as well as the Cities of Santa Clara, San Jose, Morgan Hill, Gilroy, and Los Banos projects 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 assessed area projects dated from 2016-2019, however it is unclear if the listed projects have been completed based on project status/ timing. CDFW recommends the Authority consider referencing updated sources of all approved and future projects and indicate if completed when determining impact significance to biological resources.

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. CDFW is 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 listed species will be impacted by the Project. If predictive modeling is used in lieu of biological surveys by the Authority, 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 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. 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.

Department Owned and Managed Lands

CDFW Wildlife Areas are acquired for the protection and enhancement of habitat for a wide variety of species and are open to the public for wildlife viewing, hiking, hunting, fishing, and nature tours. The construction and operation of HSR within or near CDFW lands could severely limit the wildlife and public use values of these lands as well as alter the way these lands are managed by CDFW. Most Wildlife Areas depend on visitor fees for operation, maintenance and management. CDFW has concerns that the HSR may negatively impact the number of visitors to Wildlife Areas resulting in reduced revenues; thereby reducing or eliminating the future enhancement of public recreational opportunities and wildlife habitat provided by these areas.

Specific CDFW-owned lands that are adjacent to, bisected by, or occur within 1 mile of the San Jose to Merced alignment include Cottonwood Creek Wildlife Area (Upper and Lower), San Luis Reservoir Wildlife Area, O'Neill Forebay Wildlife Area, Volta Wildlife Area, Los Banos Wildlife Area, Grasslands Wildlife Area, and Cañada de los Osos Ecological Reserve.

Moreover, this section lacks analysis of indirect impacts to conservation plans and conservation easements (CE). The alignment will go through the Mud Slough CE and other CE lands purchased for conservation of San Joaquin kit fox and other special-status species by the State of California and other entities. 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 HSRA 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.

Los Banos Wildlife Area (LBWA)- The LBWA is adjacent to the north side of Henry Miller Road. The Project would have both direct and indirect impacts to LBWA and its wildlife use. In addition, the route could also impact public hunting and fishing opportunities in the area by affecting wildlife distribution and public access. Similar impacts to public use of wildlife resources could also occur on private lands near the proposed route. The proximity of the HSR to areas used by the public for waterfowl, upland, and big game hunting should also be addressed in construction impacts and in intermittent operational impact.

CDFW advises the Authority to consider the total number of visitors and their use of LBWA in assessing the Project. Visitors participate in various activities (dog training, dog trials, fishing, interpretive walks (hiking/walking), nature study, hunting, sightseeing, etc.), at LBWA. The number of overall visitors to LBWA ranges from 16,000 to 20,000 visitors per year which generates significant revenue for CDFW. Junior hunt experience at LBWA could be affected by the audio/visual disturbances during the construction and ongoing operation of the HSR. The consequence of this may prevent youth from future hunt participation on these CDFW owned lands and impact recruitment of youth into the sport of hunting impacting the CDFW Recruitment, Retention and Reactivation Action Plan initiative. The above referenced usage on CDFW-owned and -managed lands will be substantially impacted due to noise, resulting changes in wildlife behavior, and the loss of an undisturbed wildland experience. Revenue impacts to CDFW were not addressed in the DEIR/EIS. CDFW is concerned that revenue generated during the years of construction of the HSR Project and during the long-term operation and maintenance of the HSR would likely be less. There would be diminished funding to CDFW's Wildlife Program and the operating budget for CDFW during construction (up to a 5-year period or more) of the HSR Project and on-going fiscal impacts once the HSR Project is complete.

The Grassland Environmental Educational Center (GEEC)- Visitors to the GEEC come from local areas such as San Joaquin County/Lodi, Stockton, Manteca-Stanislaus County/Turlock, Ceres, Modesto, Knight's Ferry- Merced County/Los Banos, Dos Palos, Merced, Gustine, Atwater, Ballico-Cressey, El Nido- Fresno County/Clovis. The annual average number of visitors are 6,317. The GEEC is visited by local area school children for educational outreach and enrichment and in some cases is the only outdoors educational experience in their area. The alignment alternatives are within 1,000 feet of the GEEC, thus the value and experience to its visitors will be impacted during construction and long-term operation and maintenance of the HSR. All four alternatives proposed in the DEIR/EIS will have the same impact to the GEEC; CDFW advises consideration of another alignment or alternative.

Cottonwood Creek Wildlife Area (CCWA)- The Project bisects the western half of the Upper Cottonwood Creek Wildlife Area (UCCWA) north of SR 152. While the use of anticipated subterranean tunnels for the HSR to cross the UCCWA may reduce surface

biological impacts. CDFW is concerned over tunnel portals, the access and maintenance required for the construction of the tunnel and long-term maintenance of the tunnel and the above or below ground access to the infrastructure (Automatic Train Control (ATC) and Traction Power Facilities (TPF)) will be an impact to elk and deer that use this wildlife area and other areas adjacent to the HSR. Any impacts to deer herd movement and behavior could reduce public hunting opportunities and hunt experience throughout CDFW-owned or -managed lands and reduce the public use values of these public lands. State Route 152 already poses a significant movement barrier impact to the elk herd in the area and limits the movement of elk into and out of lands on the north side of the highway. The Project would add an additional movement barrier and further restrict the movement of elk in the region. Naturally occurring springs are located on UCCWA that are adjacent to (within 200 feet) and in the vicinity of the Project. The construction of the tunnels has the potential to impact hydrology of these springs and potentially impact wildlife which rely on these springs for watering and forage of the vegetation supported by year-round surface waters.

The Secretary of Transportation may approve a project requiring the use of publicly owned land of a wildlife and waterfowl refuge ***only*** if there is no prudent and feasible alternative to using that land; and the project includes ***all*** possible planning to minimize harm to the wildlife and waterfowl refuges from the use. "Use" includes substantial impacts to wildlife resources due to close proximity of a transportation project (Department of Transportation Act 49 U.S.C. Section 303, formerly Section 4[f]). All four alternatives considered, and the Project alignment will have significant impacts to State owned wildlife areas. To date, CDFW has not been provided a comprehensive analysis of impacts to CDFW-owned land and therefore cannot agree with the Authority's assumption that a Section 4(f) is warranted. CDFW is advising the Authority to formulate other feasible alternatives that avoid these lands because CDFW cannot agree that a Section 4(f) is a reasonable supposition in planning the HSR alignment.

Section 3.7.8 BIO-MM#81: Minimize Permanent Intermittent Impacts on Terrestrial Species Wildlife Movement Pages 171-172: CDFW recommends including jump out exit features for elk and deer in areas of Upper Cottonwood Wildlife Area and San Luis Reservoir Wildlife Area and jump outs for deer from Volta Wildlife Area through Mud Slough CE. CDFW also recommends that fencing in these areas be at a minimum of 15 feet high.

Mud Slough Conservation Easement
The alignment of all alternatives will go through Mud Slough, a Unit managed by CDFW's LBWA. Construction of the alternatives would result in construction and placement of an elevated structure over the property, requiring that multiple piles be built on the property and relocation of two irrigation ditches that serve the property. The property is protected by a conservation easement (CE) for which CDFW is grantee. CDFW is concerned that the potential impacts of the HSR Project will impact the

biological values, the continued management, and potentially violate the conditions of the CE. The CE has terms of conditions that preserve the natural character and maintain in perpetuity the habitat values set forth in the required site-specific management plan for waterfowl habitat value and/or waterfowl use. Activities such as the placement of any new structures on the CE land other than hunt blinds and water control structures would be a diminution of the value of the property.

***Grasslands Ecological Area (GEA*)**
The GEA is a 230,000-acre complex of State and Federal refuges and privately owned wetlands. The GEA boundary is a non-jurisdictional boundary which has been designated by the USFWS as a priority area for protection and enhancement. The GEA is comprised of wetlands, riparian woodlands, native grasslands, vernal pools, and other habitats which support abundant and diverse wildlife, including numerous threatened and endangered plants and animals. The GEA also provides critically important wintering and breeding habitat for migratory water birds utilizing the Pacific flyway. Joseph P. Fleskes' 1992 study of female northern pintails (*Anas acuta*) north-south flight path in the GEA identified an important flight path for daytime roost sites in the north to nocturnal feeding sites in the south part of the GEA. This flight pattern is representative of other waterfowl species movement patterns. All four alternatives will bisect this important flight path. CDFW recommends that the Authority analyze the impacts of eliminating connectivity between the wetland areas of the north and south GEA and further recommends the Authority consider another alternative/alignment that would avoid eliminating this important wetland and waterbird connectivity corridor.

The DEIR/EIS should analyze the direct and indirect impacts to the Pacific flyway. CDFW recommends considering and addressing the project impacts (e.g., noise, vibration, bisection of habitats, fragmentation, bird strikes, lighting, etc.) to the Pacific flyway and incorporating necessary avoidance, minimization, and mitigation measures. The Authority has presented to the GEA stakeholders the option of a tubular enclosure for the elevated structure of rail segment through the GEA. However, CDFW is concerned that the proposed length of rail that would be enclosed is inadequate and is not an enforceable design requirement. CDFW also advises including bird strike frequency monitoring as well as monitoring the effectiveness of the deterrent used in the mitigation measure

The DEIR/EIS fails to correctly identify, describe, and classify the GEA. These mistakes result in an improperly narrow analysis and a significant underestimation of environmental impacts. The boundary of the GEA generally aligns with the federally designated Grasslands Wildlife Management Area (GWMA). The GWMA was established in 1979, and expanded in 2005, under the Migratory Bird Conservation Act, 16 U.S.C. §715 *et seq.* This federal designation authorizes USFWS to acquire and manage habitat, including CEs, on farmland and open space deemed necessary for the conservation of migratory birds. Approximately 131,000 acres within the GWMA are

protected in federal or State ownership or CEs, and tens of thousands of acres remain eligible under federal law for future protection.

Noise and Vibration

The potential for significant noise and vibration impacts to wildlife include but are not limited to nest abandonment by birds nesting near train tracks, flushing of waterfowl, disturbance that induces activity outside of normal behavioral patterns leaving species vulnerable to predation or reducing health and vigor, and abandonment of habitat in a species historical range. In the case of the State threatened SWHA, which is known to nest in trees along Henry Miller Road, nest abandonment caused by HSR travel could be a significant impact. Noise and vibration will likely have impacts to "sensitive land uses" including CDFW's Wildlife Areas, and other conservation lands. These areas should be considered "sensitive land uses" to be evaluated within a minimum 1,000-foot study area. CDFW recommends that a noise and vibration impact study be developed that includes noise and vibration ranges expected to impact wildlife. A noise and vibration impact study is necessary to provide sufficient information for a robust and meaningful analysis of the proposed project by CDFW. The study should examine noise, below surface vibration, and surface vibration impacts on wildlife. The study design should be approved by the CDFW and USFWS. Vibration (frequency levels) impacts to fish migration needs to be evaluated as well.

By narrowing the area of analysis to exclude several large areas in both the western and eastern portions of the GEA, impacts are not accurately identified, disclosed, or mitigated.

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 or 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.

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 e-mail at Primavera.Parker@wildlife.ca.gov.

Sincerely,

DocuSigned by:
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041A77B10D78486...

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Attachment 1

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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, San Jose to Merced Section

SCH No.: 2009022083

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
Before Disturbing Soil or Vegetation	
Mitigation Measure 1: State Fully Protected Raptor Habitat Assessment	
Mitigation Measure 2: State Fully Protected Raptor Surveys	
Mitigation Measure 3: SWHA Habitat Assessment	
Mitigation Measure 4: SWHA Surveys	
Mitigation Measure 5: SWHA Avoidance	
Mitigation Measure 6: SWHA Nest Tree Mitigation	
Mitigation Measure 7: SWHA Compensation for Loss of Foraging Habitat	
Mitigation Measure 8: SWHA Take Authorization	
Mitigation Measure 9: TRBL Habitat Assessment	
Mitigation Measure 10: TRBL Surveys	
Mitigation Measure 11: TRBL Avoidance	
Mitigation Measure 12: TRBL Take Authorization	
Mitigation Measure 13: BNLL Surveys	
Mitigation Measure 14: BNLL Avoidance	
Mitigation Measure 15: GGS Habitat Assessment	
Mitigation Measure 16: GGS Surveys and Avoidance	
Mitigation Measure 17: GGS Take Authorization	
Mitigation Measure 18: CRLF Habitat Assessment	
Mitigation Measure 19: CRLF Avoidance	
Mitigation Measure 20: CTS Site Assessment and Survey	

Mitigation Measure 21: CTS Take Authorization	
Mitigation Measure 24: CBB & WBB Habitat Assessment	
Mitigation Measure 25: CBB & WBB Surveys	
Mitigation Measure 26: CBB & WBB Take Avoidance	
Mitigation Measure 27: FKR Surveys	
Mitigation Measure 28: FKR Avoidance	
Mitigation Measure 29: FKR Take Authorization	
Mitigation Measure 30: SJKF Avoidance	
Mitigation Measure 31: SJFK Habitat Compensation	
Mitigation Measure 32: Mountain Lion Avoidance	
Mitigation Measure 33: Mountain Lion Compensation	
Mitigation Measure 34: Mountain Lion Take Authorization	
Mitigation Measure 35: Oak Tree & Sycamore Alluvial Woodland Habitat Assessment	
Mitigation Measure 36: Oak Tree & Sycamore Alluvial Woodland Habitat Mitigation	
Mitigation Measure 37: Oak Tree & Sycamore Alluvial Woodland Habitat Preservation	
Mitigation Measure 38: Special-Status Plant Assessment	
Mitigation Measure 39: Special-Status Plant Avoidance	
Mitigation Measure 40: Special-Status Plant Take Authorization	
During Construction	
Mitigation Measure 5: SWHA Avoidance	
Mitigation Measure 12: TRBL Avoidance	
Mitigation Measure 15: BNLL Avoidance	
Mitigation Measure 17: GGS Surveys and Avoidance	

Mitigation Measure 20: CRLF Avoidance	
Mitigation Measure 22: CTS Avoidance	
Mitigation Measure 26: CBB &WBB Take Avoidance	
Mitigation Measure 28: FKR Avoidance	
Mitigation Measure 30: SJKF Avoidance	
Mitigation Measure 32: Mountain Lion Avoidance	
Mitigation Measure 39: Special-Status Plant Avoidance	